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BALTIMORE, DECEMBER 22, 1904.

Governor N. C. Blanchard of Louisiana writes as follows to the editor of the Manufacturers' Record:

State of Louisiana,
Executive Department.
Baton Rouge, La., December 16.

Dear Sir—Please enter my name as a subscriber for one year to the Manufacturers' Record and send same to me at Baton Rouge. Also enter as a subscriber Mr. F. A. Blanchard of Boyce, La., and send the bill for these two subscriptions to me and I will remit amount to cover. I may send you other subscriptions.

You and the Manufacturers' Record are doing the South a great service.

Yours truly, N. C. BLANCHARD.

THE PRESIDENT AND THE SOUTH.

On another page of this issue of the Manufacturers' Record Mr. Thomas G. Bush of Birmingham, Ala., gives in part the impressions made on him by a recent visit to President Roosevelt, during which the President manifested a lively interest in the wonderful resources of the South and a desire that his term of office may be signalized by such material development there as to make that section an equal sharer in the prosperity of the whole country. Mr. Bush is no politician and is without aspiration for political office of any kind; but for many years he has been identified with the energies making for the best progress of the South, and therefore his conclusions as a business man from his talk with the President will have more than usual weight in all parts of the country.

ON THE ALERT.

Upon currency of a rumor that general offices of the Atlantic Coast Line and the Louisville & Nashville Railroad might be consolidated, the Commercial and Industrial Association of Montgomery, Ala., through Secretary L. L. Gilbert, telegraphed to Mr. Henry Walters, chairman of the board of the Atlantic Coast Line in New York, as follows:

Understand consolidation of general offices Atlantic Coast Line and Louisville & Nashville is under consideration. If so, we urge Montgomery, the natural and geographical center of the industrial South, as most suitable point of operation for systems extending from the Mississippi river to the Atlantic ocean and from the Ohio river to the Gulf. Its climate is ideal for all-the-year work. Chemical analysis pronounce its water absolutely pure. Railroad schedules are convenient, and all territory quickly accessible. It is the largest distributor of heavy goods south of Louisville, and the capital of the greatest wealth-producing State in the Union. Alabama produced $120,000,000 last year from six items alone—cotton, lumber, iron, coal, ore and coke. We earnestly urge your location, therefore, in Alabama, the heart of the South, and Montgomery, its pulsing center. We pledge our best efforts to effect any reasonable arrangement necessary.

It will be recalled that in the early fall the boards of trade and other commercial bodies of Alabama in convention telegraphed a number of representative industries of the East and North warmly inviting them to look into the advantages of Alabama as a situs for manufacturing. Similar spirit of enterprise is shown in this telegram quoted. It was sent at the immediate moment when it would receive most attention, and in the expectation that at any rate the thoughts of the men interested in the railroad lines might be directed along the channel suggested for action some time in the future. The incident demonstrates that Montgomery has an organization fully determined to seize every opportunity to advance the city's interests. That is one of the city's best advertisements.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 58 and 59.

FOR LABOR IN THE SOUTH.

In discussing Southern conditions the New York Sun says:

If the South should be deprived of negro toil its industry would be destroyed in chief part. Of course, it does not want to get rid of its negroes. If the efforts to attract white foreign immigration in which Southern communities are now engaged so earnestly should be successful on any large scale, a part of the negro labor might be dispensed with eventually; but the probability is that if such a change from black to white labor ever takes place extensively there will be more dissatisfaction at the South than there is now. This leads us to affirm that nowhere in the world is the industrial situation so favorable to the employer as it is now at the South. The greatest trouble with the negro labor there is its insufficiency. * * * Finally, the South is very much better off than it knows. It can afford to be indifferent to criticism. In many respects it is the most fortunate, the most prosperous region on the face of the globe. It can't be injured from outside. It can only injure itself. The habit of troubling yourself about what other people think of you is bad.

Opinions may differ as to the effect of the gradual substitution of white labor for black in the South, a substitution now taking place certainly to the advantage of the South in many respects, but there should be no difference of opinion as to the character of the white labor to be attracted to the South, where it is so much in demand. At the recent conference of representatives of Southern railways with Commissioner-General of Immigration Frank P. Sargent the latter favored a plan, already embodied in a bill before Congress, of establishing at the Ellis Island immigrant station at New York a bureau where, through displays of products and advantages by the several States, arriving immigrants might obtain authentic information about the possibilities of employment in various parts of the country.

This plan, superficially plausible, has about it, though, certain drawbacks. For example, Commissioner Sargent gave as a reason for the plan his hope that thereby may be broken up the alien colonies now forming in New York and other large Eastern cities, colonies which are un-American in principle, and therefore dangerous, and he pointed out that the plan being absolutely under the supervision of the national government, to insure perfect impartiality and honest dealing with the immigrants, would involve discountenancing of any advertising by Americans in Europe for immigration to certain sections.

The remarkable building up of the West through immigration was essentially the result of liberal advertising in Europe of the advantages of the West and of arrangements made in Europe by railroad and land companies and others interested in an increase in the population for the direct transportation of the immigrants from their homes in Europe to the new lands in America. The Southern States that are now obtaining a desirable class of immigrants from Europe are the States in which the Western policy has been adopted. These States, too, are interested more in obtaining thrifty and progressive workers than in becoming the means for solving social problems in Eastern cities. As desirous as the South is for immigrants, it cannot afford to become a dumping-ground of population under individual or governmental auspices. It therefore views with some apprehension the plan favored by Commissioner Sargent, which, however well intended, is full of possibilities of evil. Relaxation of self-dependence in immigration movements is certain to bring loss of independence in the selection of immigrants.

V. E. Nichols, secretary and treasurer South Side Lumber Co., Chicago, Ill., writes to the Manufacturers' Record as follows:

We have read with considerable interest the letter of the Shelby Iron Co. published in your Daily Bulletin of December 9, and beg to say that the Shelby Company certainly has a correct idea of Southern patriotism. We have been cognizant of your good work and influence for the South for a number of years past, and have felt the same here in the Central West. The conservative and deliberate manner in which you discuss questions of vital interest to the South is to be heartily commended, and we read the Manufacturers' Record carefully each week, the same as we do our Northern and Western trade journals. We wish you and the section you represent during 1905 a year of unprecedented prosperity.

THE INVENTIVE AMERICAN.

The bulky annual report of the commissioner of patents, with its 1100 pages printed closely in nonpareil type, is a publication hardly attractive to the general reader. But it is a wonderful exposition of the inventiveness of Americans. Its latest issue shows that from the earliest period to December 31 last 2,295,505 patents had been issued in the world, of which 758,523 were credited to the United States alone, France being second with 350,494, Great Britain third with 324,179, Belgium fourth with 180,641, Germany fifth with 165,814, Austria and Hungary and Austria-Hungary sixth with 141,787, Canada seventh with 88,020, Italy and Sardinia eighth with 64,885, Australia ninth with 39,612, and Spain tenth with 29,341. The world-wideness of the inventive instinct, as well as the relative rank in that particular of countries other than those already mentioned, is shown by the number of patents credited as follows, though not necessarily to native: Switzerland 27,727, Sweden 20,233, Russia 14,998, Norway 14,084, Denmark 13,701, India 7744, Japan 6221, Argentina 4899, Brazil 4609, Netherlands 4535, Portugal 4092, Mexico 4037, Turkey 1240, South African Republic 1218, Tunis 519, Chili 395, Uruguay 232, Venezuela 175, Hawaii 148, Hongkong 101, Guatemala 57, Fiji Islands 29, St. Helena 4, and Liberia 2.

The patents issued represent by no means the full inventive aspiration, nor are they an absolute criterion of inventions commercially successful. In the United States last year there were 50,059 applications for mechanical and design patents, the latter numbering 770. But the number of patents issued was 31,582, of which 3763 were granted to citizens of foreign lands. Those figures do not imply that there were just that many inventors or just that many absolutely different things invented. Many persons invented but one or two things, but others from three to 30. One man is found assigning as many as 16 of his patents to the same individual, possibly a partnership arrangement, with the money capital on one side and the brain capital on the other, or, perhaps, a mutual ownership of both requisites for success in gaining profit from invention. Again, an individual is found assigning all his patents to a company or a corporation upon the basis of a stated salary, and, again, such concerns as the General Electric Co. will be found as assignee of 137 patents, the Drapers of 66, the Westinghouse Electric & Manufacturing Co. of 27, the International Harvester Co. of 20, the Wheeler & Wilson Manufacturing Co. of 14, and the Mergenthaler Linotype Co. of 14, the inventive instinct of the families which have named some of these companies appearing among such assignors as Clare H. Draper, William F. Draper and George O. Draper, the last named appearing on his own account with an automobile, and George Westinghouse.

One inventor devotes his entire energies to the same line of products, such as improvements of coke ovens; to allied lines, such as a corn harvester, a chain tightener, gear-shipping mechanism, draft connection for mowers and a raising device, or a secondary battery and electric arc light, a reflector and a headlight, while another ranges through such a variety as a nipple for a linotype machine, a perforating and round-cornering machine and a filter, as a window sash, a post protector and a railway tie, or as a fire-extinguisher, a washing machine, a flytrap and a hen's nest.

Most of the inventions naturally follow devices and mechanisms of long-standing use, being concerned largely with improvements and additions. But it is a bit surprising to find during the year more than 600 inventions related to railways, including 20 of metal ties, more than 500 concerned immediately with the production and commercial use of gas, more than 500 with electricity, 350 with valves, 300 with lamps, 250 with engines, 200 with furnaces, 180 with typewriters, 180 with sewing machines, 160 with telephones, 100 with musical instruments and 100 with photographs, and many more with agricultural implements and machinery. Among the inventions were 113 dealing with toys, 92 with mailing devices, 90 with gas burners, 85 with horseshoes, 80 with sashes, 75 with printing presses, 62 with filters, 59 with fire-escapes, 56 with eyeglasses, 49 with automobiles, 37 with puzzles, 36 with linotype machines, 34 with umbrellas, 34 with fence posts (two of them being of cement), 31 with envelopes, 28 with corsets, 27 with gas engines, 22 with golf balls, 20 with voting machines, 17 with incubators, 16 with gas stoves, 16 with disinfecting devices, 12 with golf clubs, 10 with safety pins, 6 with oil stoves, 5 with cotton harvesters, 4 with oil engines, 3 with fountain pens, a flying machine, a cake-cooler, a pill-counter, a baseball bat, a bricklaying machine and a baptismal font.

This variety is as interesting as is the geographical distribution of the inventors. The following table shows the number of patents issued to citizens of the United States in 1903, with the ratio of population to each patent granted:

States and Territories.	Patents and designs.	One to every
Alabama	134	13,646
Alaska	3	21,147
Arizona	38	3,235
Arkansas	78	16,814
California	979	1,516
Colorado	404	1,335
Connecticut	912	996
Delaware	44	4,198
District of Columbia	262	1,063
Florida	67	7,888
Georgia	220	10,074
Hawaii	13	11,846
Idaho	22	5,055
Illinois	2,811	1,715
Indiana	788	3,193
Indian Territory	26	10,887
Iowa	627	3,559
Kansas	334	4,402
Kentucky	277	7,751
Louisiana	143	9,661
Maine	136	5,106
Maryland	240	3,500
Massachusetts	2,081	1,348
Michigan	950	2,548
Minnesota	501	3,495
Mississippi	70	22,161
Missouri	979	3,173
Montana	75	3,244
Nebraska	277	3,857
Nevada	12	3,256
New Hampshire	110	3,741
New Jersey	1,228	1,533
New Mexico	23	8,491
New York	4,573	1,589
North Carolina	125	15,150
North Dakota	68	4,693
Ohio	2,156	1,928
Oklahoma	89	4,474
Oregon	125	3,308
Pennsylvania	3,144	2,004
Porto Rico	1	.....
Rhode Island	350	1,224
South Carolina	76	17,635
South Dakota	92	4,364
Tennessee	208	9,714
Texas	434	7,024
Utah	73	3,791
Vermont	63	5,454
Virginia	210	8,829
Washington	230	3,262
West Virginia	152	6,307
Wisconsin	619	3,342
Wyoming	22	4,205
U. S. Army	8	
U. S. Marine Corps	1	
U. S. Navy	15	
Total	27,819	

In proportion to population more patents were issued to citizens of Connecticut than to those of any other State (one to every 996), and fewer to citizens of Mississippi (one to every 22,161). One patent was issued for every 2742 citizen of the United States upon the basis of the 1900 census, and in only 12 States and the District of Columbia was the ratio greater—Connecticut one to every 996, District of Columbia one to 1063, Rhode Island one to 1224, Colorado one to 1335, Massachusetts one to 1348, California one to 1516, New Jersey one to 1533, New York one to 1589, Illinois one to 1715, Ohio one to 1928, Pennsylvania one to 2004, Washington one to 2252, and Michigan one to 2548. These ratios reflect to a great degree, though not absolutely, the inventive and mechanical instinct of the populations of the several States. That no ironclad statement may be applied to the situation is apparent from the following table showing the rank of the several States and Territories according to the actual number of patents, the population, the gross value of agricultural products and the gross value of manufactured products in comparison with their rank according to patent output per capita, the value of agricultural output per capita and the value of manufactured output per capita:

	Rank of State according to—							
States and Ter.	Patents.	Population.	Agriculture. Gross value products.	Manufactures. Gross value products.	Patents. Output per capita.	Agriculture. Output per capita.	Manufactures. Output per capita.	
Alabama	30	18	19	30	47	37	41	
Arizona.	45	49	48	42	16	29	17	
Arkansas	36	25	22	38	49	25	45	
Calif'nia	7	21	14	12	6	15	12	
Colorado	16	31	36	27	4	26	14	
Conn....	10	29	38	11	1	47	2	
Delaware	44	46	47	37	27	38	9	
Dist. Col.	22	42	51	35	2	51	18	
Florida..	42	32	42	40	39	44	35	
Georgia.	24	11	17	26	44	39	39	
Idaho....	47	47	43	50	33	11	50	
Illinois..	3	3	2	3	9	19	8	
Indiana.	11	8	9	8	15	16	22	
Ind. Ter.	46	39	39	51	45	20	52	
Iowa....	12	10	1	17	23	3	32	
Kansas..	19	22	7	16	30	6	27	
Kentucky	20	13	15	18	28	20	33	
Louisi'na	28	23	23	22	42	31	29	
Maine...	29	30	33	21	34	22	15	
Maryla'd	18	26	29	14	22	43	11	
Mass....	5	7	31	4	5	49	3	
Michigan	9	9	13	10	13	27	24	
Minn....	14	19	11	13	21	13	23	
Miss.....	40	20	18	39	52	23	49	
Missouri	8	5	6	7	14	21	26	
Montana	38	44	37	34	17	9	10	
Nebraska	21	27	10	19	26	5	25	
Nevada..	51	52	49	52	18	4	43	
N. Hamp.	33	36	41	24	24	33	7	
N. Jersey	6	16	30	6	7	48	4	
N. Mexico	48	45	46	47	40	35	47	
N. York.	1	1	4	1	8	45	5	
N. Caro..	31	15	20	28	48	40	38	
N. Dak..	41	41	26	45	32	1	48	
Ohio.....	4	4	3	5	10	24	13	
Okla.....	35	38	27	46	31	10	51	
Oregon..	32	35	32	36	19	14	28	
Penna...	2	2	8	2	11	46	6	
R. Island	17	34	50	15	3	50	1	
S. Caro..	37	24	24	32	50	36	42	
S. Dak...	34	37	25	44	29	2	46	
Tenn....	26	14	16	25	43	34	37	
Texas...	15	6	5	23	37	17	44	
Utah....	39	43	44	43	25	28	31	
Vermont	43	40	35	33	35	12	19	
Virginia.	25	17	21	20	41	41	34	
Wash....	23	33	34	29	12	22	20	
W. Va...	27	28	28	31	36	42	30	
Wisc'sin.	13	13	12	9	20	18	16	
Wyom'g.	49	50	45	48	28	8	40	
Alaska..	52	51	52	49	51	52	36	
Hawaii..	50	48	40	41	46	7	21	

This table indicates, especially in its per capita features, that, as a rule, the agricultural regions are not as inventive in a mechanical way as the manufacturing ones. But there are some rather notable exceptions to the general relation of invention and manufacturing industry, both of which influence the other. Considered from the per capita standpoint, of 12 States leading in invention, only eight are among the 12 leading manufacturing States, Rhode Island being first in that respect, Connecticut second, Massachusetts third, New Jersey fourth, New York fifth, Pennsylvania sixth, Illinois eighth and California twelfth in that particular, and none of them is among the 12 leading agricultural States. The position of second place in invention held by the District of Columbia may be largely accounted for by the situation there of the Patent Office. Connecticut, the first in invention, is second in manufacturing and forty-seventh in agriculture; Rhode Island, third in invention, is first in manufacturing and fiftieth in agriculture; California, sixth in invention, is twelfth in manufacturing and fifteenth in agriculture; Illinois, ninth in invention, is eighth in manufacturing and nineteenth in agriculture; Pennsylvania, eleventh in invention, is sixth in manufacturing and forty-sixth in agriculture. From another standpoint it is seen that New Hampshire, seventh in manufacturing, is twenty-fourth in invention and thirty-third in agriculture; Delaware, ninth in manufacturing, is twenty-seventh in invention and thirty-eighth in agriculture; Montana, tenth in manufacturing, is seventeenth in invention and ninth in agriculture, and Maryland, eleventh in manufacturing, is twenty-second in invention and forty-third in agriculture.

These facts should be borne in mind in considering the fact that of the 27,819 patents issued, but 2796, or less than 11 per cent. of the total, were issued to residents of the South, which has less than 31 per cent. of the total population of the country. Mere consideration of the subject from the per capita viewpoint is not sufficient. For instance, about one-third of the population of the South consists of a race notably lacking in inventive instincts, however capable as mechanics certain members of it may become under proper training. The lack of that instinct may, perhaps, be accounted for by the absence during many centuries of necessity, that is the mother of invention, and which largely explains the advanced position of such States as Rhode Island, Connecticut and Massachusetts. So, too, the long-time dominance of agriculture in the greater part of the South must account for the comparative deficiency in mechanical invention there, while the bounties of nature of the past tended to suppress invention in agriculture. Still, the past proves that the instinct is in the South, and must develop as necessities to keep pace with world-progress increase. It is interesting to recall the facts that nearly 60 years ago a Southerner foretold with some degree of detail the invention of a typesetting machine, the "iron-headed and iron-fingered compositor," with which one man would be able to do the work of a dozen; that Thomas Jefferson could invent a moldboard for plows and be a pioneer in the science of meteorology; that the Virginian, Cyrus H. McCormick, with his reaping machines revolutionized world-agricultural operations; that a Mobilian, George G. Henry, produced a machine designed to make yarns upon the plantation direct from seed cotton; that Edmund Ruffin was one of many Southerners concerned in developing methods of soil conservation and scientific farming, and that the Whitney invention of the cotton gin was, after all, but an application of Southern thought given to that subject. Another revolution in agriculture is to turn upon the South's great staple. It is already partly under way with the advance in means for the economic handling of cotton, in which Southern men have been not a little concerned. But the climax is to be reached in that result of a combination of inventiveness in agriculture and mechanics, the cotton harvester, making possible economics in gathering the crop similar to those which have given America its standing as a wheat producer. That invention, which must be made by a Southerner, will count only as one in the list of patents issued, and from the per capita standpoint will be insignificant. As a contributor to the welfare of humanity, though, it will count for more than a thousand of the inventions which add so much to the weight in calculations of per capita invention.

COTTON.

Developments in the cotton situation during the past week have included the adoption of a long series of resolutions by a convention at Shreveport, La., called to discuss the boll-weevil, with an organization effected for combating the pest through cultural methods; temporary embarrassment in operating cotton mills in some centers because of migration of operatives back to the fields; arrangements by local bankers to save the farmers from loss in carrying their cotton; something of a recovery from the alarm created by the crop estimate of the National Department of Agriculture as the impression grows that even a 12,000,000-bale crop will be required in world consumption, and a strengthening of the conviction that more than ever before has been demonstrated the necessity for an adequate system for warehousing the staple.

The Shreveport Convention recognized positively and gratefully the work done by the Department of Agriculture in an effort to overcome the weevil, and urged the department to continue its educational propaganda and its operations in the infected district as being both scientific and practical. Planters were urged to co-operate with the government experts and State legislatures to enact laws for the prevention of the importation of the weevil in any stages of its growth and to provide for the burning of cotton-stalk as the cotton is picked. The president of the convention was authorized to provide through an executive committee in each State for county organizations to bring about a general adoption of cultural methods which have proved effective in fighting the pest, it being specially pointed out that, after all, success of the undertaking will depend upon the intelligent work of the individual grower. Coincident with the Shreveport Convention was held a meeting under the auspices of the Southern Cotton-Growers' Protective Association, which suggested a meeting in January at New Orleans to emphasize a curtailment in production of cotton and an expansion in the raising of food crops. The general conclusion from the proceedings of the convention was that the best that could be done at present was to anticipate the coming of the weevil by planting as early as practicable an acreage that may be economically cultivated; by diversifying crops, bringing the planter as near as possible to independence and by minimizing the evil to be done by the weevil when it arrives.

The purposes of bankers in different parts of the South to sustain the planters in carrying their cotton for a fair price have resulted in suggestions that bankers in the several States make known their purpose through the press, and that the presidents of bankers' associations meet at Atlanta on January 3 to formulate some plan whereby warehouses in each State may be bonded for the storage of cotton, the warehouse receipts to be accepted as collateral at the banks. This suggestion is in line

with the movement, now become general, for the establishment in the South of a comprehensive warehouse system, the need of which is emphasized in the following from Col. S. F. B. Morse of New York to Col. E. S. Peters, president of the Cotton-Growers' Association of Texas, who presided over the Shreveport Convention:

It is a great pity under existing circumstances that a system has not been devised and inaugurated to meet the emergency of today brought about by the bureau report, which has simply slaughtered the Southern producer. Neither through any method of reasoning nor calculation can I bring myself to believe in the figures promulgated by the bureau, but whether they be true or not, if the South were only in a position to warehouse its surplus and handle it on business methods, the entire crop could be sold at a profit. I have been told everything that happens is for the best; I am therefore hopeful that the lesson so recently administered will bring producers of the staple to their senses and spur them on to the adoption, as speedily as possible, of business methods in handling the South's great crop.

In the meantime special correspondence from Manchester, England, published on another page of this issue of the Manufacturers' Record, tells of a lessening since September of the stringency among English spinners, while a press cable from London describes a meeting at Manchester on December 16 of cotton spinners and manufacturers at which views were expressed that with an estimated annual increase in the world's consumption of fully 350,000 bales the limit of American production had been nearly reached.

The situation, therefore, reveals some contradictions, but above all looms the determination to apply more science practically to the culture of the crop and to place the handling of it upon a strictly economic and business basis.

Frank C. Ford, second vice-president and assistant manager Carolina Portland Cement Co., Charleston, S. C., in doubling the advertising space of his company in the Daily Bulletin of the Manufacturers' Record, writes:

We are gratified at the results of our first year's advertisement in your Daily Bulletin, and hope that the increased space that we are now taking will benefit us in proportion. We attribute considerable business to our advertisement with you, and while the service is expensive, we feel amply repaid by the results.

George E. King of the King Hardware Co., Atlanta, Ga., writes as follows to the Manufacturers' Record:

Enclosed please find check for $4 for one year's subscription to your excellent journal. We have but little time to read it, but whenever we do we always find something of interest. We feel that you ought to be encouraged and sustained in the big work which you have been carrying on, as we know of no single influence which has probably contributed more to the development of the South than the influence wrought by your journal.

A. M. Dixon, secretary and treasurer of the Thomasville Ice Co., Thomasville, Ga., writes to the Manufacturers' Record as follows:

Enclose you herewith check for $4, covering year's subscription to Manufacturers' Record. It is indeed a most valuable paper, and gives the South the publicity as to its natural resources and possibilities, and through your efforts they will be greatly developed. Please commence our subscription with your next issue.

A general meeting of the hard-yarn spinners of the South has been called for Charlotte, N. C., January 5, to discuss trade conditions.

The Texas Oil Co. has chartered four large tank steamers to carry oil from Sabine Pass to Northern ports.

President Roosevelt and Southern Development.

By T. G. Bush of Birmingham.

[Written for the Manufacturers' Record.]

On a recent visit to Washington I had the pleasure of an interview with President Roosevelt. He received me cordially, as he appears to receive all his visitors, and though very busy on the opening day of Congress, he very courteously and kindly gave me time to discuss several questions of interest, and some of a nature particularly so to a Southerner. No one can talk with President Roosevelt without being impressed with the fact that he is honest, capable and patriotic, and that he deeply feels the burden of his great responsibility and is greatly concerned about the prosperity of every section of the country. In talking with him you cannot but conclude that he has earnestly given his best thought and talent to all governmental questions, with a particular desire to give to the people the best class of government appointees available, considering the fact that he must necessarily rely on the aid and judgment of others to a very large degree. His action with reference to appointments is understood and duly appreciated by the people of my own State when they remember the appointment of Judge Thomas G. Jones, Judge Roulhac and Judge Kyle—all Democrats—to important and responsible positions. On inquiry I learned that of 2300 postmasters in Mississippi 23 are negroes, five being in communities where no white people live. In the other 18 cases most (if not all) were, I believe, appointees of Mr. McKinley, or else where an effort had been made to substitute more competent negroes for those already in office. The appointments made in the Southern States generally have demonstrated the fact that where the President could not, in his judgment, find competent and satisfactory Republicans, he has not hesitated to appoint Democrats, either of the gold or Bryan persuasion.

Very naturally I made reference to the industrial development of the South and spoke of the fact that the South is to wield a tremendous force industrially, and some day be strong and influential politically. The President said he fully recognized and appreciated the coming development of the South, and that when he was pressing the claims of the Panama canal to a conclusion he fully realized the peculiar advantages that the building of this great ship waterway would bring to the Southern States, and it pleased him very much to know that the Southern people, in their large business interests, would be recipients of these new and large opportunities. It was quite evident to me that President Roosevelt's sympathies have gone out to the South, and that he has an earnest desire to see this section fully recuperate from the great depression and disaster which naturally followed the Civil War.

I do not hesitate to say that the President has no desire whatever to see negro domination in the South, and is in no sense in favor of negro social equality. He does not think that the formal recognition of the negro in connection with the functions of the great office he holds could be fairly construed as making him an advocate of negro social equality. He is, of course, a friend to the negro, certainly to the extent of his having a fair showing as to improving his environments and equipping himself for the privileges which the constitutions of the several Southern States in form and substance grant to him. Every fair-minded Southerner will concede this much, for it must be apparent to every intelligent Southern man that the negro will be more acceptable and useful to the extent of being better equipped for the department of work in which he can advantageously engage and his moral character improved. It is evident to any employer of labor that increased intelligence brings increased efficiency, and to a great degree a higher appreciation of responsibility. Those who are helping the negroes along these lines are doing a good work for that race, as well as for the best interests of all concerned.

The negro question has presented itself in different phases, and more recently has been discussed in connection with the proposed reduction in representation in Congress from the Southern States. I do not know the President's views as to this matter, but it is reasonable to assume that as it was not mentioned in his message to Congress he did not think it of sufficient importance to be considered at this time. No one disputes the fact that the adoption of new constitutions by several of the Southern States was for the purpose of restricting suffrage in such a way as to place the control of said States in the hands of the intelligent and virtuous. From a certain date the new Constitution of Alabama places the same restrictions upon the white and black with reference to qualifications for suffrage. If, however, this question of reduction in representation is to be seriously considered, with a view of affecting all States alike—and it shall be shown that the new Constitution of any of the Southern States has had the effect of disfranchising a large number of those who previously enjoyed the right of suffrage, but it this way would eliminate the negro question from politics in the Southern States and give full liberty to every Southern man in thought, speech and action on all important questions concerning the welfare of the people in all sections of this great country—it appears to me that there are probably thousands of Southern men who, if necessary to secure such a boon, would willingly exchange reduction of representation; but I do not believe that the question of reduction of representation will be seriously pressed in Congress at this or any future session if the people of other sections of the country should become convinced that under the constitutions as they now exist in the several Southern States both white and black will be allowed to qualify themselves for suffrage. Any statute that might be enacted by Congress with reference to this matter would necessarily apply to all States. Whatever effect new legislation in the Southern States may have had towards abridging the suffrage of the negro, one of the best evidences of friendship on the part of the white people, and their desire to see the condition of the negro improved, is that there has been spent in the Southern States up to this time about $135,000,000 for negro education, and these appropriations will be increased from year to year according to the increased revenue of the different States. It is unreasonable to think, as has appeared in the past, that the intelligent people of the South have the same views on all public questions, and it is, therefore, not well that any conditions should exist that might prevent the expression of any diversity of opinion. It is time for the South to be understood, and not misrepresented, as it has been in many instances by so-called leaders. And those politicians who expect to continue to make capital for themselves by continued agitation of the negro question or in the advocacy of questions which the people more than once have declared a snare and a delusion and obstacles to the prosperity of this country, will find some bright day that they have been retired to private life. We cannot afford to have the prosperity of the South retarded by any man or set of men, but it must be known and understood that the Southern people are for progress, for a sound and stable currency, for all governmental measures protecting the rights of every class of citizens, for the enforcement of the laws and for the sacredness of human life. And taking such a stand, let the South throw wide open its gates to all who may appreciate its attractions and desire to cast their lot in our sunny clime. The South, with its vast mineral resources, with its production of two-thirds of the world's cotton, with spindles to consume 2,000,000 bales of cotton per annum, possessing more than half of the standing timber of the United States, with Alabama naming the price of foundry and basic iron for the world, with 60,000 miles, or nearly one-third of the railroad mileage of the country, will at no distant day attract the world with its marvelous development and rapid growth in every way.

The late Abram S. Hewitt, one of the greatest ironmasters which America has produced, a year or more before his death predicted that Alabama would dominate the basic-steel industry of the world. President Roosevelt, with a lively appreciation of the latent coal and iron wealth of the South—the development of which is only in its infancy as compared with what the future is to show, and with its other great resources and advantages for manufacturing must of necessity become the center of vast industrial activities such as have created the enormous wealth of Pennsylvania and other Eastern States and New England—hopes to see his term of office signalized by such business development in the South as will make that section an equal sharer in the prosperity of the whole country. As I have already said, when President Roosevelt was working out the Panama-canal situation he fully realized that its construction would prove of untold value to this section in helping to bring about the fulfillment of Commodore Maury's prediction, made nearly 60 years ago, when he said that the cutting of an isthmian canal would break down the barrier which separated the South from the trade of the Orient, with its 600,000,000 people, and would make the Gulf of Mexico the center of the world's shipping. The motto of the Manufacturers' Record—"the development of the South means the enrichment of the nation"—is a thought which I am sure is fully appreciated by President Roosevelt, who recognizes that the broadest business development of this section not only means the enrichment of the nation from the material point of view, but its enrichment in a broader national spirit, uniting all sections in closer social and business ties.

Many unfair criticisms have been made by the people of the North against the Southern people with reference to their treatment of the negro, due largely to ignorance and prejudice; but I believe this number is comparatively small. The business men of the South and the North understand each other, and eventually it will be through them that a more perfect and satisfactory understanding will come. Those who are familiar with this so-called great negro problem are rapidly concluding that it will be sooner and better solved by the Southern people if no obstacles are put in their way. I do not believe that there is anyone who is more willing to be spent in this good work than President Roosevelt, as he is having better opportunities of learning from time to time the true spirit of the large majority of the Southern people.

You cannot talk with President Roosevelt without feeling that he appreciates

the South as an important part of this great and wonderful country and his earnest desire to be President of all the people, and that he is extremely friendly to the Southern people, and stands as ready, as far as is in his power, to contribute to their prosperity and happiness as to the people of any part of the country. I believe that before his next term shall be ended this fact will be realized.

I write this letter, giving in part the impressions made on me on my visit to the President, because I love the South and the prosperity and happiness of her people is the nearest object to my heart, and I know that the welfare of the South can be promoted by a better understanding between its people and the President and citizens of other sections of the country. And, however we may differ on political questions, we should not be misunderstood, but should have it known that the Southern people stand for good government, for law and order, for "peace and justice," and are ready to join hands with the people of the North, East and West in making this country that which it is destined to be—the leading nation of the world.

I write to the Manufacturers' Record on this subject because it is non-partisan, has always had the courage of its convictions on all questions concerning the welfare of the South, and has, I think, done more for building up the South industrially and attracting the attention of the world to its resources than any other journal published in this country.

Birmingham, Ala., December 12.

Reasons for New England's Industrial Growth—X.*

[Special Correspondence Manufacturers' Record.]

Boston, December 19, 1904.

In and around and over and beyond all the industrial development of New England there looms up the fundamental factor of power, which, more than any other one feature, is responsible for the marvelous strides the industries of the world have made. Hardly more than a century ago the hand and foot of man furnished practically all the power that moved the industries of the world. Even water-power was then but slightly utilized outside of an occasional mill for grinding wheat and corn, and here the windmill was an earlier and more often met with utilization of nature's forces supplemental to the power of man. In transportation from prehistoric times the burden had been lifted from the back of man by the domestic animals in an almost unchanged manner for thousands of years. No Oriental imagery of a hundred years ago could have adequately portrayed the marvels of development which the world of transportation and industry has experienced through the introduction of water-power, steam, compressed air, gas and electricity; and viewing the activities of inventive genius today, and seeing the remarkable changes that are constantly occurring on every hand, there is bewilderment in any attempt to conceive the extent to which this revolution will go before the end is finally reached.

In the industrial development of New England her splendid water-powers furnished the first and most decisive factor. Although the steam engine came into use in Old England coincident with the invention of the power loom in the last quarter of the eighteenth century, the rivers of New England were the chief power producers there in the earlier stages of her industrial development, and even the census of 1900 shows that 35 per cent. of New England's power continues to be water. In the United States as a whole steam engines furnished 8,742,416 horse-power, or 77.4 per cent. In New England, out of 1,871,798 horse-power, steam comprised 1,101,128, or 58.8 per cent., the water-power being 655,931 and all other kinds of power 114,739. In the entire United States water-wheels furnished 1,727,258 horse-power, or 15.3 per cent.; electric motors 311,016 horse-power, or 2.7 per cent.; gas and gasoline engines 143,850 horse-power, or 1.3 per cent., and all other forms of mechanical power 54,490 horse-power, or .5 per cent. It is an interesting side fact, by the way, that 66 per cent. of the manufacturing establishments of the country still use hand-power, but not so surprising is the statement that out of a reported value of $13,004,400,143 for the product of all the manufacturing establishments, only $1,183,615,478 come from the 66 per cent. of factories employing hand-power That the notable water-powers of New England are still utilized to a large extent is evidenced by the fact that at Lowell 49 per cent. of the total power is water, at Lawrence 36 and at Manchester 50.4. With the great general increase in the use of water-power for electrical transmission it seems likely that the water-powers of New England will be utilized more in the future rather than less, although it is true that in numerous instances almost entire reliance has come to be placed on steam and electricity, even where water-powers of more or less value are available, and what further changes may occur with developments of power now being perfected it is wholly impossible to tell.

Through articles published in the Manufacturers' Record, and through visits to the New England plants of the International Power Co., as well as through interviews with the company's president, Mr. Joseph H. Hoadley, I have lately seen and heard so much of the possibilities of wonderful power development along new lines that I am almost constrained to believe what has gone before is hardly more than elemental, and that the systems of the future will make the power producers of today appear as temporary, crude and costly expedients by comparison. For present and concrete consideration there is the internal-combustion engine manufactured by the International Power Co. at the Corliss Steam Engine Works at Providence, R. I., and in use now in a number of widely-scattered places throughout the country. This engine uses only oil and air as a fuel, eliminating the cost of boilers and the wages of firemen, while the power is produced at a cost for fuel from one-third to two-thirds less than that of other engines. Furthermore, repairs are almost a negligible quantity, two of these engines which have been in continual operation in Providence showing a repair account for the past year of only $1.25. Very general attention to these engines was attracted during the St. Louis Fair, where three of them were installed in the Tyrolean Alps concession, furnishing all the power and the thousands of lights which that vast establishment required. The internal-combustion engine has been described in detail in the Manufacturers' Record and is the subject of interested attention everywhere. While it is being subjected to improvement, experiments along that line being continually conducted, it already accomplishes an economy in operation which makes it a factor to be reckoned with in days when every item of cost in manufacture must be considered.

The proposed combination of this internal-combustion engine with an electric generator to form a new type of locomotive, also recently described in the Manufacturers' Record, opens a vista of even greater and more incalculable possibilities. Using only oil as a fuel, it would be possible, as has been pointed out, to take on sufficient fuel at New York for a trip to San Francisco without stopping. High speed, great power and economy of construction and operation are prominent advantages claimed for this locomotive, but it can readily be figured out how other and even more revolutionary advantages might appear. The great success of the subway in New York suggests subway systems as inevitable for all the greater cities of the country. The operations of the Pennsylvania Railroad in tunneling under the Hudson river to give underground terminals in the heart of New York city, with an extension under the East river, and the possibilities of a steamer connection, if not dock construction, at Montauk Point, may indicate a movement toward the greater use by railroads of the tunnel as a means of reaching the center of large cities and getting in and out without loss of time. It is easily conceivable that the Hoadley-Knight internal-combustion locomotive, as it is named, would be found the only locomotive feasible for such underground service, as it would be free from smoke and could deliver a train at a station after completing a run. The time required for detaching a steam locomotive and connecting an electric locomotive would be saved, and as a speed of 100 miles an hour is promised for this new locomotive on a trip run, the saving in time on the road after reaching the tunnel would be an immense advantage to the traveling public. There might then be several tunnels under East river, with terminals at the City Hall, for instance, and with a tunnel extending from the City Hall in New York under East river and to a connection with trains for Montauk Point, it would be possible not only to transport foreign mail so as to save several hours' time by overtaking eastbound steamships, but the passenger who could save half a day by taking such trains at the City Hall, New York, and boarding his boat at Montauk Point would almost invariably choose the plan that lessened his time away from his business. Again, with such a type of locomotive on the railroads running between the big cities, there might be cars equipped with electric motors, so that on reaching New York, for instance, a motorman might throw on his shoe, and the train being broken up, one car could be driven to the City Hall, another to 42d street, another to Harlem and another to Brooklyn. And in taking trains the cars could be similarly distributed, awaiting the collection of passengers, when the cars could be assembled at the central station, the train formed, and then whirled to its distant destination, all at a vast saving of time to the traveling public, which frequently loses almost as much time in getting to local places as a trip on the railroad between cities has consumed.

This may be a somewhat fanciful view of the possibilities which developing power contain, but even the dreamy vagaries of one generation frequently become the commonplace realization of the next. The subway itself was a dream of 30 years ago, and electricity as a motive power is so new that it smells of fresh paint, and the creaks are not yet out of its joints. Take the matter of auto-conveyances. A few years ago these horseless carriages were the butt of the newspaper joker, and were hardly more seriously considered by the public at large than are flying machines today. Now the toot of the chaffeur is as familiar a sound as the clang of the street-car gong, and admittedly the end is nowhere near in sight. Paris and London streets have more auto-vehicles than those horse-drawn, and this side of the water is showing an immense increase in such conveyances and in plans for their extended use. In some of my investigations I have run across the plans of the Manhattan Transit Co. of New York, a company owning a remarkably broad and quite perpetual franchise for the use of the streets of New York city, and which is now at work devising a type of auto-vehicle which will give the public a most variegated kind of service, from a seat in a public conveyance, running on schedule time between specified points, to an exclusive ride anywhere in town, and all at a fraction of the charges which are made today.

In all that I have heard about the possibilities of the new power there is much that pertains to the personal acctivity and individual enthusiasm of Mr. Hoadley himself, whose abilities as a mechanical and engineering expert have been amply demonstrated in his remarkably busy and successful career. After having literally "worked" his way across the continent from his native State of California, contracting for all kinds of power plants in the cities between the Atlantic and the Pacific coasts, he located in New York in 1895, and shortly after that began his career as an organizer of industrial companies by the purchase of the Wheelock Engine Co. at Worcester, Mass. The Cramps of Philadelphia joined him in this purchase, but he later bought out all the stockholders, and then purchased the Green engine patents, and combining the two best features of the engines—smoothness in the Green and economy of operation in the Wheelock—he named the Worcester plant the Green-Wheelock Engine Works. Next, in February, 1898, he bought the Corliss Engine Works at Providence, which, while having been so prosperous in earlier days that George H. Corliss died worth $15,000,000, had then an indebtedness of $800,000, and had been practically shut down. This brought under one ownership the works of the three former rival engine-builders of New England, and it was a matter of personal gratification to Mr. Hoadley to secure the Corliss Works, where were built the engines that had done more to revolutionize the industries of the country than any other one factor. The Corliss invention of the automatic cut-off as distinguished from the slide-valve engine made possible so great an economy in power production that Corliss used to agree to take his pay in a percentage of the saving his engine effected over the common type, and his great fortune was largely secured through the savings he thus made in the cost of operating his engines, which had been adopted in 65 per cent. of the textile mills throughout the country. Furthermore, the Corliss engine has been the beginning of the development of modern power. The economy of large units being demonstrated, larger foundries were required to build the larger engines, larger pulleys and shafting were needed for the larger machinery, and mill construction that would sustain the larger loads became necessary, so that the modern mill and factory with machinery on every floor first became a possibility. Then the idea of the economy of large units was adopted by the railroads, with the result that larger engines required heavier rails, larger ties and better ballast, revolutionizing the entire industrial and transportation business of the world.

Immediately after the purchase of the

*This series of articles bearing upon New England's industry is intended as an inspiration for the South.

Corliss Engine Works Mr. Hoadley bought the Rhode Island Locomotive Works at Providence, which from having been the third largest works in the country in 1882, furnishing the locomotives for the New York elevated railroads, engines for the Chicago, Milwaukee & St. Paul road, the Boston & Providence branch of the New York, New Haven & Hartford, the Canadian Pacific, etc., had at the time of the Hoadley purchase not turned a wheel in three years, being in the hands of the bondholders. The plants were rehabilitated, and shortly afterward the Providence plants of the Corliss Engine Works and the Rhode Island Locomotive Works were in full operation, with 2500 hands and a payroll of $1,000,000 a year.

With operations of this magnitude Mr. Hoadley had no thought of undertaking other enterprises, but the development of the properties he had bought proceeded on so important a scale and with ramifications so great that it was found to be impossible to stop at this juncture. Greatly-enlarged operations became necessary, and the International Power Co. was formed by Mr. Hoadley as a holding company to protect the interests that had been obtained up to that time. Experience with the locomotive works at Providence had demonstrated the desirability of a combination of the locomotive works of the country, and although six times within 30 years such an attempted combination had failed, Mr. Hoadley, without asking the local public for a dollar or interesting them in any way, purchased all the important locomotive works of the country with the exception of one in Philadelphia, and with his associates in New York organized the American Locomotive Co. with $50,000,000 capital, $25,000,000 each of common stock and preferred. He had just finished this undertaking, well proven to have been one of the most successful industrial enterprises ever launched, when he caused the International Power Co. to assume control of the American Ordnance Works of Bridgeport. This company, which had consolidated the gun works of the country and also the making of projectiles, had gone into debt for nearly $800,000. Under the new management all the debts were paid off and $237,000 were cleared within two years.

As subsidiary to the International Power Co. Mr. Hoadley organized the American & British Manufacturing Co. with a capital of $10,000,000, which owns and operates the plants of the American Ordnance Works and of the Corliss Engine Works and the Green-Wheelock Engine Works.

Today the International Power Co. has for its assets the largest block of stock of the American Locomotive Co., the control of the American & British Manufacturing Co., and owns almost invaluable patents of many sorts, as well as several manufacturing contracts, such as that for the Diesel engine, the Hoadley-Knight internal-combustion engine, etc.

The International Power Co. is a remarkable creation in many respects. It has an authorized capital of $600,000 preferred cumulative stock and $7,400,000 of common, $6,400,000 of which have been issued. Within three years the market value of its properties was increased over $12,000,000. Under the manipulation of speculators the stock has had an erratic career, and its real value is said by its friends to be about halfway between the market price today and the dizzy height it reached before the flurry of 1901, when it sold for about $200. The company is announced as free from indebtedness, is maintained practically without expense, and is said to have a surplus of some $3,000,000 to its credit. Although dividends were suspended for some time previous to October of this year, 3 per cent. on its preferred stock has been declared every 45 days since, and it is said that the profits of the company's operations justify the expectation of the same rate for an indefinite period.

International Power is Mr. Hoadley's particular pet. He believes in it for what it is doing today and for what it will do when the revolutionary power producers in which he is interested have been introduced on land and sea. He owns a control of the stock in the International Power Co., and through these holdings, as well as through individual ownership, is the largest owner by many times of the stock of the American Locomotive Co. He is a large owner in the American Diesel Engine Co., and owns the control of the Manhattan Transit Co., with its $10,000,000 capital stock and franchises in perpetuity, which include the use of the streets of New York for power-propelled vehicles for public use and other valuable franchises, among them that of the New York & Brooklyn Railroad Co., with a franchise for a tunnel between City Hall, New York, and City Hall, Brooklyn, and terminal rights on Manhattan Island. There are those with prophetic vision who believe they foresee the time when all long-distance transportation lines within the large cities of the country will be by subway, when the streets will be burdened neither by elevated structures nor surface street cars, when the horse will be relegated to the farm, and when all surface transportation will be by swift-moving, noiseless and sanitary auto-vehicles. In this view none is more enthusiastic than Mr. Hoadley, and none is more confident that it all will come to pass, and he believes that the Manhattan Transit Co. is predestined to provide the public with the new system of transportation, and that the imminent introduction of vehicles his company is now designing will aid in hurrying forward the day when the streets will be restored to the people and urban existence will be a delight to the eye and a comfort to the body.

Inventive and surcharged with initiative himself, Mr. Hoadley has the added advantage of having had associated with him Mr. Walter H. Knight, one of the foremost electrical men of the world—one who, next to Edison only, has probably taken out more patents than any other electrical engineer. He invented the underground trolley electrical railroad after seven years of experimentation. While chief engineer of the General Electric Co. there was put down in Washington under his patents the first successful underground trolley electric road, which was afterwards followed by the big success with the New York street railroads. Mr. Knight perfected what is called the type K controller, which gave the General Electric Co. exclusive control of all the electrical controllers of the country, all other manufacturers of electrical machinery having to buy controllers from the General Electric Co. Together Messrs. Hoadley and Knight have worked on compressed-air problems, that having been a favorite study of Hoadley's from the time he reached the draughting-room in his apprentice days. One of the successes was in developing the necessary appliances which enable an ordinary mechanic to handle air pressure up to 5000 pounds per square inch. Mr. Hoadley himself has been very much interested from an early day in auto-vehicles, and has been actively engaged in promoting experiments with such vehicles. He and Mr. Knight invented, perfected and patented many of the mechanical devices used by air-power companies today. Although in a measure the compressed-air business is popularly supposed to have been a failure, yet without compressed air the internal-combustion engine could not run. In this most economical of high-pressure engines 62½ per cent. of air is used to 37½ per cent. of oil. Compressed air is, furthermore, much used for furnishing power in deep-level mines and in long tunnels.

Numerous inventions and appliances relating to power are placed to Mr. Hoadley's credit, among which is the Hoadley compound-wind (winding) system of rope-transmission. Power is the subject of his deepest thought and consideration, and unbounded enthusiasm is his dominant trait. He sees beyond the vision of most investigators and experimenters, and although, as must happen with all men, not everything he has foreseen has developed exactly along predicted lines, yet his intensely practical turn and his extraordinary drive have carried him through more and greater successful achievements than are counted to any but the exceeding few, and even then not until their years are far beyond the short span of Joseph Hoadley's 40 years.

In the development of his latest producer of power he sees vast changes and economies in transportation both by sea and land, rail and vehicle, as well as in the production of power for mills, factories and plants North and South. Around him are men of affairs and seasoned judgment who are looking with his eyes, and are confident of a new and revolutionizing success. And among those who are of the South the hope is strongly expressed that his interest and his energies, together with the strength and vast wealth of International Power, may be largely directed toward the development of industrial interests in that section.

ALBERT PHENIS.

MENACES OF AN IDEAL COTTON SITUATION.*

By D. A. TOMPKINS, Charlotte, N. C.

The twentieth century in its beginning holds out unusual fair promise to the people of the cotton-growing States of America. I have often pointed out how the cotton-planter and cotton-farmer has been compelled since the Civil War to double the production of cotton each decade, and yet not receive any increased money for the increased crop. Speaking roughly and in round numbers and in average figures, the production and the gross income from cotton since the Civil War has been about as follows:

First decade, 2,500,000 bales at 24 cents a pound, equal	$300,000,000
Second decade, 5,000,000 bales at 12 cents a pound, equal	300,000,000
Third decade, 10,000,000 bales at 6 cents a pound, equal	300,000,000
Fourth decade, 10,000,000 bales at 10 cents a pound, equal	500,000,000

Last year the price possibly brought the average to 12 cents a pound for the last decade, which brought a gross income of just about double what the Southern cotton planter and farmer has heretofore worked for. Formerly there was produced in each succeeding decade 100 per cent. more cotton and the price was cut in half. From the third to the fourth decade there was no increase, the quantity remaining about 10,000,000 bales, but the price practically doubled. This situation would seem to be an ideal one for the Southern farmer, yet it is not without its menaces and its dangers at the present time. Among these I enumerate:

1. The boll-weevil.
2. The determination of the spinners of Europe to foster and develop the production of cotton in other parts of the world.
3. The increasing scarcity of labor suitable for cotton farms.
4. Speculation.

For the purpose of maintaining the present favorable conditions for the cotton-farmer there must be counteracting influences developed to protect the American cotton industry against these menaces.

The boll-weevil is not the first pest which has brought discouragement to the cotton-farmer. In the case of others a way has been found to practically destroy the pests before they have seriously injured the plant or diminished the crop. I have confidence that a way will be found to practically eliminate the ravages of the boll-weevil. I appreciate that the federal government has done much service and valuable work and that the report of its agents are not overly encouraging, yet in the past the magnitude of this menace has not been appreciated except by those where the boll-weevil existed. It is only now that the people of the whole cotton area, and through their influence the government itself, has just awakened to the importance of making more comprehensive efforts and of bringing more varied talents to bear upon this question. I have no doubt that in due course of time a remedy will be found which will destroy this evil as has been done with other pests before.

The production of cotton in America on a large scale has developed a market for cotton goods the world over, which makes a cotton supply to meet the requirements of this market one of the most important elements in agriculture. The increasing and pressing demands of this market, while the crop has not been increased in America, has tremendously emphasized the importance to the European manufacturer of looking elsewhere to get the cotton necessary to meet the market requirements. There are many who think that nothing will come of the efforts of the various cotton-growing associations of Europe. They cite the fact that during the Civil War the production from the rest of the world was not materially increased. During the Civil War it was well known that as soon as the war was over the South would again promptly supply the world with good cotton at a cheap price. The stringency during the war was looked upon as a purely temporary condition. Aside from this, four years is not sufficient time to develop any great industry to any very great extent. The present condition of the United States does not seem to promise any very great increase in the cotton crop, but it promises a continued high price. The tendency throughout the cotton-growing States is to increase manufacturing interest, and not the production of cotton; at least the manufacturing interest is relatively increasing to a greater extent than the agricultural interest. The people who are interested in the cotton-growing associations in Europe are men well accustomed to large enterprises and to the making of comprehensive plans for whatever they undertake. It is idle for us to rest in the present situation and to feel that the Europeans can accomplish nothing. It is exceedingly important, if we would maintain our position in cotton production, we must give heed to each of the menaces which threatens to turn any part of the production which we have heretofore supplied over to the people of other parts of the world. I am one who believes that the practical monopoly which

*Address before the National Cotton Convention held at Shreveport, La.

we have had in the past can be continued if we will protect the conditions surrounding the production of cotton against menacing influences, and if we bring about, in the place of the menaces, fostering influences.

The establishment and increase of manufacturing interests in the South and the revival and increase of commerce, and of the transportation facilities necessary for commerce, have not only absorbed the actual increase of population in the South, but have drawn much labor from the cotton fields. Much of the labor which has lived on the farms now finds more profitable occupation in producing perishable foodstuffs, cutting wood and in supplying fuel to that large population which has quit the farm and found profitable occupation in the factories, on the railroads or in the commerce of the cotton-growing States. Cotton is no less profitable than it ever was. On the contrary, its production is more profitable perhaps than ever before in its history, and yet these other profitable occupations are so attractive to a large proportion of the population that it has made cotton production stand practically still for 10 or 15 years. The remedy for this deficiency lies in two directions: First, in part we need white emigration to the cotton States; second, in part we need more machinery specially adapted to do the farm operations connected with cotton-farming with less labor. We particularly need a cotton-picking machine. This is a difficult proposition, and yet in this present situation it would seem no more difficult than a sewing machine seemed before it was invented. In the abstract it is no more complex problem than that of harvesting, binding and otherwise handling wheat as is done by the modern machines. A number of people are already at work on a cotton-picker. Three efforts are in some degree notable: Those of Mr. C. T. Mason of Sumter, S. C., who is said to have produced a machine that picked cotton at the rate of 2000 pounds per day. This was a machine drawn by a mule. The enterprise was abandoned for the reason that the promoters found it to be absorbing more money than they were willing to put out. While it picked a great quantity of cotton in one day, many of the parts were delicate and it easily got out of order. These difficulties would probably have been overcome by continued experiment and continued effort. The American Cotton-Picker Co. of Pittsburg, Pa., has had a machine in process of development for several years. This company is giving attention to two main points; one is to the production of a machine that will pick cotton all right, and the second is to the development of a variety of cotton which is specially adapted to be picked by machinery. The third effort is that of Mr. Theo. H. Price of New York, who has bought some patents on cotton-picking machinery and is backing some experiments looking to the development of a machine. It now costs about $100,000,000 a year to pick the cotton crop. The power used is practically the power of the fingers. This is like it was with sewing when it had to be done by hand. The quantity of sewing which could be done in a day by a woman was multiplied manyfold when she could use part of the strength of her body to do the work instead of her fingers, and it was immensely multiplied when it could be done by power. So with cotton-picking. When a device is invented by which man-power or mule-power can be applied to picking cotton, instead of finger-power, the greatest deficiency of labor now existing will have been overcome. With a successful machine operated by mule-power the cost of picking cotton might be reduced from $100,000,000 per year to $10,000,000 per year. Thus, there is a premium of $75,000,000 or $80,000,000 a year for a successful cotton-picker, even after making big allowances for repairs, cost of machinery and cost of labor necessary to handle the mule and the machine. If we can get a successful cotton-picker and could turn one-quarter the European emigration now coming into the United States to the cotton States, we will have supplied all the deficiency of labor that there is—the greater part by the machine and the remainder by the white European emigrant.

The cotton plant is one of the most delicate of the agricultural products. It is produced in a climate that varies enough to make the variation in cotton production range from 150 pounds of lint cotton per acre to 225 pounds of lint cotton per acre. One frost might make this difference from one year to another. Because of the extreme delicacy of the plant and of extreme variations in climatic conditions we furnish to the world one year a crop which is overwhelmingly big and the next year a crop which is insufficient to supply the ordinary demands. This creates a condition in which the speculator holds high carnival in dealing with cotton. The legitimate merchant and the manufacturer are made to turn gambler whether they will or not, and the ordinary course of trade is tremendously disturbed. The average production for 10 years, if it could be maintained, would bring about an average price. Inasmuch as the climate forbids this, it is important that the production shall be by some artificial means brought to more or less of an average, and thereby the price would be brought to an approximate average. I believe that this might best be done by the development of a system of warehouses which did far more than shelter and care for the cotton. Existing warehouses simply issue a receipt for a bale of cotton. No effort is made to state what kind of cotton the receipt stands for, nor does the warehouse company assume any responsibility for the grade, weight or anything else connected with the cotton. Insurance is higher than it ought to be. I believe that if a comprehensive warehouse company would engage the best graders to be had and would issue a certificate in which every factor relating to the bale of cotton was accurately entered, and the warehouse company stand responsible for the description of the cotton as given in the receipt, that such a receipt could be traded in to better advantage than the bale of cotton itself. The purchaser of the receipt in Carolina, in England or in Germany would know more about the particular bale of cotton in question from the receipt in hand than he would know about it if he saw the bale of cotton. Cotton being one of the very best collaterals on the market, such receipts standing for the cotton exactly might be traded in in the financial institutions of the whole world. Thus, it would be feasible to bring cotton within the reach of all the surplus money of the world, and when there was a large crop the surplus would undoubtedly be carried over by financial institutions as investments until a small crop should bring the price to an average. It would save the forcing of the surplus onto the market, and by proper construction of warehouses, proper protection against fire and building in proper units, the cost of carrying cotton could be very much reduced by reduction of insurance and by reduction of interest rate in consequence of the certificate being an accurate representation of the cotton itself, and being as good for money in Providence or Liverpool as in the town in which the warehouse is located. I exhibit herewith the picture of a warehouse which I have designed to carry from 20,000 to 30,000 bales of cotton, according to weight and extent of compression. I exhibit also a receipt which not only stands for a bale of cotton, but gives the general classification, the grade, the length of the staple, the degree of tinge, the degree of softness, the degree of fineness; and all these points are given in accordance with the judgment and skill of the best and most expert graders obtainable. Therefore, the record written by the experts would make a certificate representing a bale of cotton stand for more to a purchaser than if an average unexpert purchaser could see the bale of cotton itself. This certificate would stand for more to a banker in Liverpool or in Bremen than it would to the average man who was in the town where the cotton was located and he could see the cotton. It would, in addition to having the record of an expert's judgment on every feature of the particular bale of the cotton, also have the backing of a responsible company guaranteeing this record. Such a system of warehouses, with such a receipt, would tremendously simplify the purchase by a mill man of cotton in a warehouse, no matter where located in the cotton-growing district. The European spinner, by the purchase of these certificates, could become the owner of cotton in Memphis with absolute confidence that with a certificate in hand he knew more about the cotton than if he could see it in Memphis, and with the further absolute confidence that the responsibility of the warehouse company insured his getting the cotton whenever he wanted it, and yet equally insured its safekeeping for him as long as the owners of the certificate wanted him to do so. By making it feasible for a mill man to buy cotton from the owner in warehouses outside the territory, and by bringing cotton into a shape where it could be held as an investment and the surplus carried over from one season to another as an investment, speculation would necessarily have a much narrower field of operations than now, and the cotton-spinner would have an infinitely better situation in respect to buying cotton than he has now.

INDUSTRIAL ENGINEERING AND BETTERMENT.

By H. S. Morrison, Associate of the Amer. Soc. M. E.

[Written for the Manufacturers' Record.]

How many of all the varied industries in the South, ostensibly operated under the best conditions, make a study and practice of keeping in touch with the most modern methods and ideas? Suppose their managers have the time they need, how many doubtful experiments would they be likely to try? How much literature must they study and be able to digest? How often do the owners find themselves wondering how their competitors can sell at such prices? To meet these prices, how nearly alike are the cost and the selling price? How hard is it to keep them from touching or even overlapping. You say there is something wrong. There certainly must be, but what is it? Your manager is a good one and is rushing his various departments to the limit of their production, and you know your purchasing is done on the lowest market. Then there is but one conclusion. It must be that your plant is not properly equipped or arranged.

Maybe you have not the proper advantages of natural light or the right receiving and shipping facilities. Maybe your competitor has his machinery so arranged that one man attends to more machines than the same man does in your plant. Perhaps he handles his materials in the course of manufacture fewer times and shorter distances than you do, reducing the cost of this labor. Possibly he has machinery to do what you employ men to do. Maybe his men are more comfortable, and, therefore, more contented than yours are. Very likely your power is costing you too much. Maybe it is due to the wrong equipment, maybe to the way this equipment is operated. Possibly there are leaks, causing unnecessarily heavy contingent expense. Maybe the engine is not working economically; or, possibly your machines are not turning out the work they should turn out. Maybe they could be run faster. Probably you pay for running a lot of shafting that could be avoided. And so on, the possibilities of loss are many.

Suppose, when you find yourself confronted with these difficulties, you could consult a person who is making a study of manufacturing conditions at large and closely following the best engineering and trade literature of the day, who keeps abreast of the trials, the results and failures of one kind and another, and who has spent much time in fitting himself, practically and technically, to study your conditions and solve your problems. Add to this the certainty that this person has no commercial interest in the use of any special materials or equipment, but is simply interested in the owner's satisfaction and the record of economies or increased output effected by himself. Suppose he could save you the single expense of a $25 per month man. That is a 10 per cent. investment of $3000, and for what? A comparatively small sum to cover his time and expenses. And suppose he effects greater savings. It takes no longer to have made the study and the benefits are all the greater. On the other hand, suppose he does not make a single valuable suggestion. You would merely have paid for useful information. But if this is the case, your cost and selling price are not so close that you will be confronted with these problems.

Suppose you have made money in the past, and in order to meet present conditions you can afford a new and up-to-date plant. This would then involve the selection of site, erection of buildings, purchase and location of machinery, the advantageous use of what old machinery you have and the disposal of what you do not need. Surely there could be no question as to the value of such a person under these conditions. The mere reduction of all this expense to a competitive basis would take care of his fee and likely effect a considerable saving to you, all other benefits being clear profit. The advantages of such association must be obvious, but let us review them a little.

To be most efficient, this plant must have the greatest output at the least expense; not in one particular part of the plant, but throughout the whole. The site having been selected with due regard to natural advantages, the questions arise:

First, the type and size of the buildings.

Second, the entire plant layout.

Third, the equipment, its class, capacity and arrangement.

Fourth, the awarding of contracts, supervision of work, approvals and acceptances.

Fifth, systems of cost-keeping.

Under the first head must be considered the advantages of the various constructions from the standpoint of interest on investment, economy of maintenance and insurance rates. Appearances must be sacrificed to usefulness. Ornamentation of such buildings does not earn money

on the investment. The building must be considered as a means to an end. As such it should be suited not only to form a protective agent for the labor and machinery, but to embody, as it were, the purposes of this labor and machinery. Natural light properly diffused is all important. Lack of overhead room is frequently a source of trouble, not only in handling the work, but in affording ventilation. On the other hand, excessive overhead room makes the heating proposition difficult.

Under the second head comes the consideration of the plant as a unit, the best relative position of one building to another, the proper facilities for receiving and shipping. The buildings must be so arranged that one will not interfere with the light in the other. Sufficient yard space must be allowed to suit the needs of the plant and meet the insurance requirements.

Under the third head comes the careful comparison of the various equipments in other plants doing the same work. The kind of power equipment is very important, as is the method of the distribution of this power to the various buildings and the layout and arrangement of the machinery in your buildings. It is frequently possible by grouping machines, especially automatic ones, to reduce the labor that would be necessary to operate the same machines under different conditions. Thev should be so arranged that the materials in the process of manufacture will not have to be carried back and forth throughout the plant, but rather, as nearly as possible, that they should be moved continuously from one end of the plant to the other. Much saving can be effected thereby in the cost of handling the work.

The question of power is frequently a very complex one. It can only be decided after due consideration of the price of the various fuels and the quantity of power needed. The distribution of this power is also important. Very great saving in friction losses and maintenance can be effected by the means of the individual system of driving, whereby long lines of shafting and the attendant expense can be eliminated. Indicator cards taken by the writer some time ago from an engine developing 28 horse-power showed a shafting and friction load of about 12 horse-power, or in reality nearly 41 per cent. of this power was being developed and paid for without any return. The more modern method, electric drive, would, in this instance, easily have cut down the cost in transmission to 10 per cent. or 12 per cent. at most, have saved the expense of shafting and belts and the daily maintenance of same, while only increasing the first cost a very little. The equipment of these buildings should also include every practicable labor-saving device, every reasonable convenience for the physical comfort of the men, such as lockers, lavatories, etc. Any investment that improves the employe's attitude to his employer is a paying one.

The value of your engineer under the fourth head needs bare mention. He is accustomed to contracting and to the methods employed by contractors in arriving at their bids. He has been brought up to see things from a contractor's point of view as regards economy and profit. All the various trades employed on the building can foresee and arrange their work so as to prevent delay. Proper legal consultation at various times is also very necessary in fixing the legality of contracts, records, approvals, etc.

The subject-matter treated under the fifth head can best be appreciated by your accounting department, but each employe should be made to understand that he is a factor in this cost. A contract system whereby the employe benefits by his own thought and increased energy is productive of excellent results. It is all-important that your cost should be thoroughly itemized and individual study given to the reduction of each item.

But you say that your business has not been so successful and does not justify the abandonment of your present plant with the losses necessarily entailed. You have not outgrown your present quarters, and you have room for expansion. So much the better. You also say that you have not the means to undertake a general revision of your plant, and that it means too much delay to business. Such problems are the order of the day.

Suppose you were to call in this same person to make a study of your conditions all the same. Suppose he takes the size of the building you are in, the sizes and speeds of your shafting, the dimensions of the floor space and headroom required for each one of your machines, and, with this information, through your co-operation, develops for your consideration a complete new arrangement within that building. Suppose he showed you the lines on which your plant ought to be extended, where you could improve your receiving and shipping facilities, your power transmission, where labor could be saved and where other economies could be effected. Suppose you appropriated from your capital or earnings the first year enough money to start this general plan of improvement, merely rearranging your present equipment as suggested. This could be done gradually and without affecting in the least the continued operation of your plant. Every year new railroad bridges are being substituted for old ones without any delay to traffic. Would this not necessarily mean reduced expenses and increased output? Would you not find yourself growing to meet your competitor's cost and gradually but surely putting yourself in the position to carry out your entire plan? Would you not gladly vote the necessary amount from each year's earnings or put in the additional capital to effect the complete change?

It is impossible, within the limits of so short a space, to treat this subject in more than a general way, far too general to give a clear and definite idea of the advantages to be gained by such independent association. It has become the rule rather than the exception in our Northern States, and is gradually growing to cover the South. It is a mere matter of time before every plant must have its betterment appropriations. Contractors and large manufacturers everywhere find that their life and profit is dependent on up-to-date methods and employment of the best engineering skill. Why should not this apply to manufacturers alike? Can you afford to see the business going to your competitors or coming to you on closer margin each year?

Richmond, Va.

America's 1905 From the Business Standpoint.

The forecast of prosperity for the coming years is continued from last week in this issue of the Manufacturers' Record through letters from representative business men in different parts of the country. An especially interesting feature of this week's correspondence on that line is the interest shown in immigration to the South, supplemented by indications of the beneficial effects of the movement. The letters follow:

Booking Work Very Rapidly.

F. C. Myers, manager Indiana Foundry & Machine Co., brass and iron founders, South Bend, Ind.: We have had a very successful year, with business going on in a regular channel till the summer months came, when we were forced to work to our capacity and seven days per week till the middle of September. From that time on we have been working steadily, with our plant very comforably filled with work. Since the election is over we do not notice any great change in the situation, except that people are gathering confidence. Business is picking up to a certain extent and prices are gaining strength. We are doing a strictly contract business, and as a result it takes longer for the fluctuations of the times to get to us. However, the new year is opening up very well, and we are booking work very rapidly. The prospects for a full and busy year are very encouraging, and we are making preparations for the best year in our history. This slow and steady growth of business which we are now experiencing is more to our tastes than a sudden and rapid increase, and we think is a better indication that it is here to say, and not a sudden inflation, to fall back again as soon as the excitement is over. The whole thing is said in a word when we say that business is having a strong, steady growth that is healthy, and which forecasts a very prosperous year. We trust that others are having the same good fortune as we, and wish to thank you for giving us this opportunity of expressing ourselves.

Activity in Building and Industries.

W. S. Erwin, general manager Tallulah Falls Railway, Cornelia, Ga.: As our operations cover only some 30 or 40 miles of territory in Habersham and Rabun counties, we have just finished the most prosperous season in the history of these two counties. This is partially due to the opening of 15 miles of new railroad early last spring, which has given to the unlimited natural resources of this country a great impetus toward development. As proof of the prosperity along our lines, we have a net increase of 25 per cent. in the earnings of our road over the previous year. Delightful fall weather has evidently been taken advantage of by the farmers along our line if one is to judge by the increased acreage of fall plowing. The apple and peach growers have also been benefited by this mild fall weather in so much that their orchards show plenty of cultivation and thrift. Never in the history of these two counties has there been greater activity in the building line than is shown at the present time. Especially is this true in towns along our new road—Wiley, Tiger and Clayton. There are several new industries in the process of construction, namely, a silk plant, brick plant, ice plant, starch plant and an asbestos plant. This latter industry is well under way and turning out a finished product at Turnerville, Ga. We understand that this asbestos plant is turning out a new product known as asbestos plaster and meeting with great success. In summary of the situation, I am forced to admit that with our good start, and anything like a fair deal from the weather man and Dame Fortune, for the coming year the outlook is particularly bright in this section. For the general good I trust that the reports which you receive from other sections will be as bright as ours, as we are not in the least selfish, and wish everyone well.

Influx From the North and West.

Brobston, Fendig & Co., real estate, Brunswick, Ga.: All indications point to greater prosperity than the country has ever before experienced. The high price which the farmers got for their cotton, the continued increase in the price of lumber and naval stores have put more money in the hands of the people than they have ever had before. This has resulted in the bank deposits being largely increased, and instead of the South being a borrower it has required but little assistance during the past year to handle the cotton crop. The lands which have been denuded of timber by the saw-mill and crosstie man have now been turned into profitable farms. There has been a greater influx of people into this country from the North and West than ever before, almost every train bringing homeseekers. The people of the South are realizing that this section furnishes the only pioneer country left, and it seems that the movement has just started them coming into this section to take advantage of our cheap and fertile lands and pleasant climate. Our Jacksonville office reports very prosperous times throughout the entire State of Florida. There is great interest being manifested in fruit-growing, and this also promises to be the banner season for the tourist and taking up lands by homeseekers from various parts of the country.

Only a Possible Temporary Check in Operations.

D. N. Camp, president the Skinner Chuck Co., New Britain, Conn.: Business in New England since the election indicates increased activity, which is shown not only by the increase of orders, but in the enlargement of manufacturing plants, the organization of new enterprises and the increase of capital. The financial excitement in New York during the last few days has tended to tighten the money market and increase the rates on loans. This may check building operations temporarily, and the custom of taking inventory at the close of the year will restrict the giving of new orders for the rest of this year, but increased activity in all lines is expected after New Year's.

Increase Noted in Every Line.

E. A. Myers, manager Model Gas Engine Works, Auburn, Ind.: Business has been unusually active with us during the past month for this season of the year, and from the outlook prospects are much more encouraging for the coming year. Everything indicates a large increase in business the coming year over the past. We are manufacturing gasoline engines on a large scale, also automobiles complete and automobile parts, and the increase is noted in every line.

Twice Doubled in Two Years.

W. B. Johnson, vice-president and superintendent Palestine Ice, Fuel & Gin Co., Palestine, Texas: The business outlook for Texas was never better in all lines, especially ours. Our business has increased so much that we were compelled to double our plant two years ago, and now we are compelled to double up again in order to meet the great demand that will be here for ice this coming summer. The future seems very bright for us. It looks now as if it would be doubtful if we can be able to handle all the ice we have already contracted for, and we have contracts for two years ahead with railway companies for icing fruit and vegetable cars. The fruit and vegetable industry has simply grown to be something very large.

An Advance of 60 Per Cent. in Business.

Wm. J. Sauer, secretary and treasurer American Machine Co., Inc., elevators, ice machinery, etc., Louisville, Ky.: For the year 1904 we have no complaint to make about our business, having increased the same over 1903 over 60 per cent., and we are pleased to say that we look forward to the coming year for even a greater increase in our business. We base this on the inquiries we have received since the middle of November from the West and South. The inquiries for goods in our

line, which consist principally of elevators, have been at least 300 per cent. greater than at the same period of 1903. It is possible that this is due to the improved electric elevator which we have put on the market in the last year and has met with entire success wherever we placed same. We know of no reason why we should not, as well as the country in general, have a long period of business activity.

Indications of Good Business.

W. D. Dunning of Alexander Iron Works, Syracuse, N. Y.: Our business through the year has been good, and the indications are that the coming year will be equally good, and this applies to both this concern and the Boomer & Boschert Press Co.

Picked Up Considerably.

H. E. Ludwig of Ludwig & Co., engineers, Atlanta, Ga.: After a short period of relative quiet, business has picked up considerably, and prospects for next year at least are very encouraging. In our capacity as consulting engineers we are in continuous contact with most industrial branches, private and municipal, and on the fact that a marked tendency for increased activity is noticeable not only in special branches, but almost generally, we base our opinion as above expressed.

Possible Dangers to Long Business Activity Removed.

Nordyke & Marmon Company, Inc., flour-mill engineers, Indianapolis, Ind.: It would seem that all of the possible dangers to a long period of business activity are now out of the way. In our own business the season just closing has been a reasonably prosperous one, and we have no reason to expect less favorable conditions during the coming year. Without unusual adverse crop conditions we can see no reason why there should not be a continuance of prosperity for some time to come.

Immigrants on the Move.

M. Schulter, industrial commissioner St. Louis & San Francisco Railroad Co., St. Louis: Our correspondence indicates that since the November election confidence seems to have been restored, and several parties with whom we have been corresponding for some time regarding the location of their plants along our lines in the Southwest have now decided to act definitely. This would certainly show that manufacturers were waiting until after the elections before taking any decisive steps, and because of the result they are now ready to go ahead. All of the plants along our line with whom we are in touch report that they are working their men full time and that business is very good. The Southwest is filling up very rapidly with new settlers, and we understand that approximately each month 1800 immigrants are being carried over our lines to different points in the Southwest, where they are commencing the work of breaking the soil, besides building homes and carrying on general farming. On account of this heavy immigration and because of the settling up of the country new towns are springing up, and different lines of business houses are being established at each town, and numerous industries of all kinds are being established. I see every reason, therefore, why I should be optimistic regarding business conditions in all sections reached by the lines of the Frisco system.

Ready for Advance in Trade.

Selden E. Marvin, secretary and treasurer Franklin Boiler Works Co., Troy, N. Y.: From the recent experience of my company I should say the Manufacturers' Record's view of the business outlook is an entirely legitimate one. The fundamental strength of this country has never been as great as it is at present. Our people have prospered exceedingly in the farming districts of the West and the splendidly-developing sections of the South. The period of reaction apparently has passed and has left a readjustment of values, made necessary owing to too rapid expansion in the period preceding it. We are therefore firmly established and ready for such an advance in trade and enterprise as will further convince other nations that in domestic, as in foreign trade, we stand supreme. In our own branch of work we find business increasing rapidly and prices growing stiffer in proportion. We are preparing in every way for a very busy year.

Better Profits for 1905.

Frank P. Milburn, architect, Columbia, S. C.: Business outlook generally is good, with better prospects for 1905 that we had this time last year.

FOR SUBSTANTIAL PROGRESS.

Further Comments Upon the Election Results by Business Men.

In addition to the mass of letters from business men in all parts of the country commenting upon the election's results, the Manufacturers' Record received the following:

Mr. C. C. Hanch, Indianapolis, Ind.: "I have read with considerable interest the editorials in the Manufacturers' Record under the headings 'Power for the South' and 'A National Sheet-Anchor,' and, in the main, I am in accord with the views expressed therein. It is unquestionably true that the South must bend its energies to the greatest development of its wealth-creating powers in order to increase its influence in the business and political world. As suggested, the newspapers would do a great work if they would cease political discussions and make stronger efforts to awaken the people to the necessity of untiring energy and work. Railing against the concentration of wealth and power in New York or elsewhere will be an impotent effort to change the trend of events. With reference to the radical utterances of certain party leaders with socialistic tendencies, will say that I am firmly convinced that the tendency towards statutory law is already too strong for the good of the country. Instead of enacting statutes in regard to hours of labor, arbitration, limitation of authority of the courts, control of corporations, etc., in my judgment it is to the best interest of all concerned to allow all questions involved to work themselves out by the process of evolution, as has been the case in the past where a solution has been accomplished of any pre-eminently great question. Give the good old English common law, which is based on common sense, a chance to solve difficulties as they present themselves, without writing specific statutes which may in a day become totally inapplicable to conditions on account of natural changes."

H. M. Aubrey, San Antonio, Texas: "In my judgment President Roosevelt and the Republican party have it in their power to render all of the Southern States doubtful at the next national election by pursuing the following policy:

"1. Absolute non-interference in any local matters, the negro question to be considered local.

"2. The selection of federal appointees in the South from among the white men of the section in which they are to serve, taking care that they are of good repute, and, so far as may be possible, are not professional officeholders or seekers.

"3. Refraining from any attempt to reduce representation, giving as a reason therefor the fact that the South should have power proportioned to its responsibility and its burden.

"4. Stop the waving of the 'bloody shirt' by leading Republican politicians and newspapers. The South is today more patriotic than the North on account (presumably) of its possessing a larger number of Americans of the fourth and fifth generation, of men who are lineal descendants of those who won the country, and in case of danger it would supply men for love of country where the North would have to resume the bounty system.

"5. Make such a reduction of the tariff as will lighten the burden now resting so heavily upon a population largely dependent upon agriculture.

"We have a mixture of many races in our Commonwealth, but our growth and our greatness is undoubtedly due principally to the courage, the endurance, the conservatism of the Anglo-Saxon race, to the men of English descent, the only successful colonists of modern times. Today it is in the South that you find a far larger percentage of that race than in any other section, and no greater testimonial to its virtues can be found than the history of the South for the past 45 years, a period during which the South has, under the most adverse circumstances, borne successfully the greatest, the most grievous burden ever laid upon a people. That people is great enough to forgive defeat; it asks only to be let alone, to be allowed to carry its burden as it best may. Let that be done, and upon such matters as tariff, sound money, labor or money trusts, etc., it will divide as thoroughly and effectively as New York State, and (eliminating the negro) it will be a division that cannot be affected by money or place."

Lou Bryson, Davenport, Iowa: "Your editorial on 'Power for the South,' in my judgment, states the case clearly and succintly. The South is certainly now having an opportunity to lay aside policies that have long kept out immigration and capital. Much is now going in, and both will increase in volume, resulting in upbuilding both manufactures and agriculture in that section if the South will enlarge its ideas and make an open door to all. Your editorial, 'A National Sheet-Anchor,' is certainly a very intelligent conclusion on the results of the election. It was no tidal wave, but a decision of the American voters that they would endorse that party and policy that had demonstrated by promises performed that it could best administer the affairs of this nation. To the Republican President and Congress are now committed its affairs. There are many reforms to be instituted and carried to successful termination by the party in power, and I believe it will do it."

SOUTH CAROLINA'S STRIDES.

An Inviting Field for Moneyed Men and Farmers.

[Special Cor. Manufacturers' Record.]

Edgefield, S. C., December 15.

The people at large do not realize the great strides that South Carolina has been making and is making not only in all lines of manufacturing and other industries, as well as in the production of cotton, corn and the like. It would be well for the people of this great and growing country of ours to keep their eyes on South Carolina. She has pulled herself to the front and risen from the results of the war of 1861-1865 and from many years of negro misrule and corruption to one of the leading agricultural and manufacturing States of the Union. Her prosperity commenced after the overthrow of the negro State government in 1876, just 28 years ago. Since that time her progress has been wonderful, and in the future it will be still more wonderful unless all signs fail. It is an admitted fact that South Carolina is the leading cotton-manufacturing State of the South; and if the facts are looked into it will be found that it is the leading cotton-producing State of the South, when its area is taken into consideration and compared with that of other States. New mills are being built every year, and all kinds of other industries started, and if the present rate of increase goes on for 10 or 15 years it will then probably be the leading cotton-manufacturing State in the Union.

It is not my intention to go into detail as to those matters, my desire being to call attention to a fact that, it seems to me, has been overlooked in speaking of the cotton-growing States and their production. In a recent statement that I saw made the cotton production was given by States as follows: Texas, 2,992,300 bales; Georgia, 1,764,900; Mississippi, 1,539,800; Alabama, 1,278,900; South Carolina, 1,099,700; Louisiana, 917,900; Arkansas, 832,700; North Carolina, 609,000; Indian Territory, 398,100; Tennessee, 343,000; Oklahoma, 246,000; Florida, 77,200; Missouri, 43,900; Virginia, 19,300.

It will be seen that South Carolina comes fifth in the above list, when, if the areas of the States named were taken into consideration, it ought to stand first. It is the smallest of the cotton-growing States, and at the present rate of production per square mile, if it was as large as Texas, it would produce more bales than does that State. Georgia is about three times the size of South Carolina, and as will be seen by reference to the cotton production of the two States, it only produces about 600,000 more bales than South Carolina.

The country at large has been taught to believe that Texas, Louisiana, Mississippi and Alabama were the States in which there were the best cotton lands. I was of the general opinion until I saw the statement referred to, and commenced to calculate the cotton production by States. My opinion has reached a radical change since doing so. We have fine cotton lands and our farmers are using the most advanced modes of cultivation. Besides, we have the finest climate in the world and our lands produce in paying quantities all farm products. There is no climate in the world to surpass our Piedmont section for healthfulness. It is pleasant in the winter and summer alike.

There is no more inviting field for moneyed men, farmers and men of all callings than South Carolina. We have neither the extreme heat in summer nor the extreme cold in winter that is found in more northern latitudes, and if the Northern farmer really understood the situation here he would seek this section in great numbers.

The negro population of the State is gradually decreasing, especially on the farms. The negro is leaving the State, and those that remain are inclined to seek homes in the towns and cities. As the negro population decreases and white people fill its place the resources of the State from an agricultural standpoint will be developed more rapidly. We need and must have many thousands of good white immigrants and thousands of good and sturdy farmers from the North and Northwest. When that happens the Southern Atlantic States will be the garden spot of the earth, with South Carolina its center.

WM. P. CALHOUN.

Electrical Transmission Information Wanted.

The Manufacturers' Record has received advices from J. F. Gautney of Jonesboro, Ark., that he wants to obtain full particulars regarding the transmission of electricity for power and lighting purposes. Mr. Gautney contemplates building a plant to transmit power by electricity to a distance of 100 miles, and it is this project that prompts him to seek details. Engineers and builders of such plants are invited to correspond.

December 12, 1904.

Manufacturers' Record Publishing Company,

Baltimore, Maryland.

Gentlemen,-

We heartily concur in the view of Mr. T. G. Bush, President of the Shelby Iron Company, of Birmingham, Ala., that Southern business men can do at this season nothing more appropriate than to bring to the special attention of their acquaintances in other parts of the country the Manufacturers' Record.

We have followed for years the work done by your paper in bringing together Northern investors and Southern resources. The whole country, but especially the South, is now enjoying the fruits of that union in the lumber trade, in mining, in transportation and in manufacturing. Other and greater fruits are to be gathered and we know of no publication more likely than the Manufacturers' Record to hasten the wonderful harvest. Anything tending to increase the efficiency of your paper in that respect is bound to benefit the South substantially and an increase in the number of your readers in other parts of the country will surely contribute to the much-desired end.

We wish to participate with you in the task, and, therefore, we send herewith subscriptions for fifty yearly copies of the Manufacturers' Record to be mailed to friends of ours in the North and West for which we agree to pay $200.

Very truly yours,

Hugh MacRae & Co

ORGANIZED 1867.

CAPITAL $ 300,000
SURPLUS $ 250,000

The Citizens' Bank of Norfolk, Va.

W. W. MOSS, President.
J. W. PERRY, 1st Vice President. TENCH F. TILGHMAN, Cashier.
McD. L. WRENN, 2nd Vice President. GEO. J. TWOHY, Trust Officer.
NORMAN BELL, JR. Asst. Cashier.

Norfolk, Va. Dec. 10, 1904.

Manufacturers' Record Pub. Co.,

Baltimore, Md.

Gentlemen:-

The letter of Mr. T. G. Bush, of Birmingham, Ala., President of the Shelby Iron Co. published in the Manufacturers' Record of Dec. 8th, suggesting that the best possible way for Southern business men to prove their practical interest in the broadest development of the South is by giving to their correspondents or customers in other parts of the country a year's subscription to your paper, the great exponent of Southern progress, sounds a key-note that should be taken up all along the line.

Every copy of it issued is a preacher of the gospel of work for the advancement of the South as the promised land of this country. The wider its circulation the more quickly will the wonderful potentialities of the South be fully realized.

The Citizens' Bank of Norfolk, Va. desires to participate in the good work and, therefore, seconds Mr. Bush's admirable motion. We hereby subscribe for fifty copies of the Manufacturers' Record for a year to be sent to friends of ours in the North and West, a list of whose names is enclosed, for which we agree to pay $200. Please notify these new readers of the Manufacturers' Record that it is sent with our compliments.

In common with the whole South, Norfolk is enjoying great prosperity and its future is as promising as that of any city in America.

Very truly

Tench F. Tilghman

Cashier.

Manufacturers' Record Pub. Co.,

Baltimore,

Maryland.

Gentlemen:-

We believe that an increase in the number of the weekly readers of your publication among the progressive men of this country will be of great service to the South, and that as a means to this end business men of the South will be co-operating with you for its material welfare in assisting to enlarge the circulation of your publication, the object of which is to act as a medium through which the undeveloped resources of the South may be brought to the attention of investors.

With this idea in view, we are sending you herewith the names of thirty-five persons to whom we desire you to send at our expense during the coming year, copies of the Manufacturers' Record.

That the South has before it an era of prosperity is generally conceded; it has the advantage of climate, temperament of its people, and a wide field for development of nature's gifts in water power, in mines, fields and forests.

Southern business men have a great opportunity before them and, in enlarging the field covered by the Manufacturers' Record, testify both to the usefulness of this publication, and proclaim the advantages of their section.

Very truly yours,

Fred'k E. Nolting.

Vice-President.

THE TREND OF INVESTMENT.

New Yorkers Buy Controlling Interest in Alabama Consolidated Coal & Iron Co.

[Special Dispatch to Manufacturers' Record.]

New York, December 21.

A controlling interest in the Alabama Consolidated Coal & Iron Co. has been sold through Messrs. Thos. P. Grasty and Richard H. Edmonds of Baltimore to strong financial people in New York. The buyers are people not heretofore largely interested in Southern development, but appreciating the coming industrial supremacy of this section, they have, after thorough investigation, made this purchase with a view to largely extending the operations of the company in the further enlargement of its coal and iron output and in the manufacture of finished products. There will be no change in management, and Mr. T. G. Bush will continue as president, some Baltimore directors retiring to make room for New Yorkers. The development of this company and its excellent financial showing for five years since it was first organized demonstrates the very great possibilities in the development of coal and iron interests of the South, and its purchase of a controlling interest by New York people shows the rapid trend Southward of investment interests of the country.

STEEL RAILS FOR THE SOUTHERN

Iron Pipe for the Panama Isthmus—Activity at Birmingham.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., December 19.

Since last report there has been no change in the iron market save an increase in the hardening tendency then noted. That feature in the market buyers who want iron will readily encounter. The demand is sufficient to readily absorb all the iron that can be obtained; and if all the orders received were accepted, one day would clean up all the furnace yards of what little stock they have and shave them close up on deliveries for the first quarter of the coming year. One might characterize the market as fine for the season of the year; but comparing it with normal conditions it can be called only fair. Considering the tonnage involved, the past week was a banner week for sales of iron and of steel rails.

The steel mill, after protracted negotiations with the Southern Railway, succeeded in placing with that road 65,000 tons of rails, delivery during the coming year. The Southern wanted 75,000 tons, but the mill, because of previous sales, could not make some of the deliveries desired, and the order was finally scaled down to the amount above named. This order, added to the orders already accepted and booked, will equal the capacity of the mill for the entire year ahead of us. If you take into consideration the fact that the mill has turned down orders aggregating over 50,000 tons of steel rails you cannot fail to be impressed with the fact that the Ensley steel rails of the Tennessee Company are in demand. The report that there is to be added five open-hearth furnaces to the battery they now have in operation is incorrect. But improvements are to be made increasing the efficiency and capacity, at a cost of over $200,000. It is unquestioned now that the mill is on the high road to successful conduct. It has passed the experimental stage, and wherever its rails have been sold orders have been duplicated and increased because they have triumphantly stood the severest test to which they could be subjected. The making of first-class steel rails here is now a solved problem.

Turning to iron, the character of the buying would indicate that there are a good many holes to be filled yet. Orders are still being declined or are being pared down, as circumstances direct. Old customers are favored by the furnace interests, and no attempt is being made to mark up values. Your correspondent is thoroughly convinced that if all the iron in furnace yards was bunched and offered on the market every ton of it would be taken before night. Even then the aggregate would not exceed the sales of one day on an active market of normal conditions. The majority of the sales made during the week were on the basis of $13.75 for No. 2 foundry. Whenever that price has been shaded there has been a reason for it. For instance, there was one sale of 1500 tons of gray forge for delivery during January and February at $13.50, furnace make. This is a conditional sale, and means that if the furnace makes it the buyer gets it; but if the furnace don't make it, the seller is not held to delivery. Such sales leak out and are quoted as market value and deceive buyers.

There were several sales, regular, of gray forge at $12.75, and if all the orders at that price had been accepted the market would have been cleaned up. There were sales of No. 2 foundry above $13.75, running up to $14 and $14.25, but these prices were for small lots and under the head of retail lots. No. 1 foundry sold at $14.25, as did also No. 1 soft. In one sale of gray forge at $12.50 the seller had the option of delivering mottled iron or part mottled and part gray forge. No. 3 foundry sold as high at $13.25, and some went at $13. One lot of 1500 tons was sold to go right into the Pittsburg districts, although they are quoted as being cheaper than this district. Such sales are proof positive of the condition of the iron market. The buyer paid for this lot on the basis of $13.75 for No. 2 foundry.

The pipe works are as busy as bees. Besides the large contracts to be delivered by the United States Pipe Co. on the Isthmus of Panama, the Dimmick Pipe Works are loaded up with orders. Lately they have captured an order from Muscatine, Iowa, that amounts to $30,000. The pipe works will melt more iron this year than ever before in their history.

The movement in coal continues strong, and there is no change in prices to record. The same can be said of coke. The scarcity heretofore mentioned has not been ameliorated, and prices range from $3.75 to $4.

There was incorporated the past week the Alabama Land & Development Co., with authorized capital stock of $1,000,000. They claim to control and own 100,000 acres of land in Winston county, all of which, save 12,000 acres, is virgin forest. The land is rich in minerals and coal and timber. Winston county, in which these lands are situated, has heretofore been outside the line of improvements because it was away from the railroads, having only eight miles of them in her territory. That would be quickly remedied as development is pushed, and branch roads will be built if tonnage of profit offers.

A very important deal was consummated last week when the Milner-Kettig Company sold its business to the Crane Company of Chicago. None of the particulars can as yet be obtained, but it is gossip that the price paid for the stock and good-will of the selling firm was very satisfactory. It is also gossip that Major Milner retires from mercantile life and Mr. Kettig remains with the purchasing firm, holding an important position with them.

The bids for the hiring of convicts show them to be the highest recorded since the system was adopted, and accentuates the need for more labor.

The Tennessee Company has made arrangements to bring in some Huns, and is building houses to accommodate them.

J. M. K.

A METALLURGIC ADVANCE.

Manufacture of Ferro-Phosphorus at Rockdale Furnace, Ala.

Editor Manufacturers' Record:

The manufacture in Rockdale Furnace, in this State, of ferro-phosphorus, an alloy of iron and phosphorus, hitherto made only by the electric furnace, is an event sufficiently notable both as a metallurgic and economic advance to call for much more than passing mention.

Rockdale Furnace is an ordinary iron-blast furnace located at Rockdale, in the southern part of Maury county, built for a capacity of 50 tons of pig-iron per day, and using for this purpose the limonite (brown) ores of the western iron belt, with coke as fuel. It is owned by the Rockdale Iron Co., in which Mr. J. J. Gray, the superintendent, is the principal stockholder. During 1898 Mr. Gray, who is a young man, and whose reputation as a skilled furnaceman is very high, was superintendent of the furnaces of the Sheffield Steel & Iron Co. at Sheffield, Ala. The Sheffield Company had a call from a concern making large numbers of their castings for a very fluid iron, with from 4 to 6 per cent. of phosphorus. As then running, the furnace was unable to turn out an iron with more than 1¼ to 1½ per cent. of phosphorus, and no ore giving the required percentage was available. It was therefore determined to undertake the introduction of the required phosphorus in the flux by substituting for a portion of the lime phosphate rock from the nearby phosphate district of Mt. Pleasant. The undertaking was entirely successful. The results showed that for this percentage of phosphorus the iron combined with about the same proportion of the phosphorus of the flux as is normally taken up of the phosphorus content in the ore, and that the bases of the rock were capable of substituting quantitatively the bases of ordinary limestone in the formation of slags. These important principles established, further experiments showed Mr. Gray that it was possible to increase the proportion of phosphorus so as to make the valuable ferro-phosphorus on a commencial scale, and its manufacture was accordingly begun in September last.

The results seem to have exceeded the most sanguine expectations, so far as the quality of the material is concerned. The specified minimum of phosphorus is 17 per cent. Analyses of several casts made in our laboratory showed from 18 to 19.72 per cent. phosphorus, while other casts have shown as high as 21.81 per cent.

The details of the methods used by the furnaceman are hardly necessary to mention here, except to say that calculation will show that for a phosphorus content in the ferro-phosphorus of between 17 per cent. and 20 cent. from one to one and one-quarter tons of phosphate rock for every ton of metal made must be put into the burden. To carry this great amount of lime it is necessary also to add sandstone, and, as is to be expected, such work has been found exceedingly hard on the furnace. Moreover, under the present practice it is impossible to carry such a burden for longer than two weeks at a time on account of the accumulation of lime, and so ferro-phosphorus and ordinary pig are made alternately. Only 20 to 25 tons of ferro-phosphorus per day can be turned out from this furnace, which can probably satisfy the present limited demand.

These operations have likewise thrown some light on the methods of utilization of low-grade phosphates, suggested by Mr. Charles Catlett in the Manufacturers' Record of October 20. The slag from this furnace has not run over about 8 or 9 per cent. of phosphoric acid, and nothing is known as yet regarding the chemical condition in which it exists. The proportion of phosphorus taken by the iron is much greater than Mr. Catlett seems to have thought possible. This, in connection with the fact that to increase the percentage of phosphorus in the slag it would be necessary to put more phosphate rock in the burden, make it doubtful whether it would be possible to so handle the furnace as to throw simultaneously into metal and slag enough phosphorus to make each of value. It would probably be possible to so manipulate a furnace as to make a slag only (without attempting to make iron) from low-grade phosphates that would be fairly comparable to the basic slags of the steel-maker, but that this would be a profitable operation in competition with existing materials and at present prices seems very unlikely.

As to the value of Mr. Gray's discovery there can be no doubt. It is, moreover, possible that when investigation along these lines is further developed interesting results may follow, not only with materials just discussed, but also in the production of other alloys of iron.

LUCIUS P. BROWN.

Nashville, Tenn.

Kentucky-Tennessee Oil Field.

[Special Cor. Manufacturers' Record.]

Barbourville, Ky., December 19.

The price of Kentucky-Tennessee oil experienced a decline Saturday of five cents a barrel. The Somerset product, the lighter-grade oil produced in this field, was reduced from $1.01 per barrel to 96 cents per barrel, and the present selling price is lower by 29 cents than it was during December of last year.

There are now fully 100 rigs in operation in the lower fields along the Kentucky-Tennessee line, and many excellent producers are turning up every day. Last week's record shows out of 17 completions in that region 16 producers, and but two of the duster variety. Considering the fact that many extensions are being proven every week by rigs operating outside the regular developments, the record of last week shows the field up in a very satisfactory light.

The latest development, and one that is being watched now with keen interest, is that in the Poplar Cove region of Fentress county, Tennessee. During the past few weeks half a dozen wells have come in there, with excellent productive qualities, and the Standard will finish a pipe-line extension to that field in the course of a few days. The grade of oil differs very little from that produced in the Pennsylvania fields, and ought to command $2 per barrel in the opinion of experienced operators.

Oil-well contractors are now in demand in the upper divisions, especially along the route of the new pipe line into the Wolfe county fields. About 40 rigs are now in operation in the upper fields, most of the drilling being concentrated in Wolfe and Estill counties and contingent fields.

W. S. HUDSON.

General Manager Seeks Engagement.

A man who has had an extensive experience as a general manager of a large and successful manufacturing establishment will be at liberty after January 1 to seek another engagement. He is prepared to give and receive references. The management of a branch office of an established business would also be given consideration. Correspondence can be addressed to "Engagement," care of the Manufacturers' Record, and will be promptly forwarded.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

LOUISVILLE & NASHVILLE.

Review of Work Completed During 1904 and in Prospect for 1905.

Mr. R. Montfort, chief engineer of the Louisville & Nashville Railroad, writes from Louisville, Ky., to the Manufacturers' Record concerning the work which has been done during the year 1904 by the company, as follows:

In the Birmingham district the Cain Creek branch of the North Alabama Railroad, consisting of 29.05 miles of main track and 14.24 miles of subordinate branches, has been completed and is now in operation. This branch leaves the main line of the South & North Alabama Railroad at Black Creek, Ala., eight miles north of Birmingham, and runs in a westerly direction to Banner, Ala., and Sayre, Ala., on the Warrior river. About 11 miles of the main line of this branch and 1.9 miles of siding were constructed last year, and the remaining 18.05 miles of main track and 12.34 miles of sidetrack were completed this year.

The extension of the Oneonta & Attalla Railroad from Altoona, Ala., to a connection with the N., C. & St. L. Railway at a point one and one-half miles west of Attalla, Ala., a distance of 15.56 miles, is completed with the exception of the tunnel at Tumlin Gap through Blount mountain, and this will be completed in the spring of 1905.

The Turkey Creek branch, diverging from the main line of the South & North Alabama Railroad at Fedora, Ala., 18 miles north of Birmingham, and extending in an easterly direction up Turkey creek 2.95 miles to reach coal mines at India, Ala., has been constructed during 1904.

Hogeland branch, .65 of a mile in length, has been constructed during the year. This branch leaves the main line of the Linton branch at Hogeland Junction near Coaldale and runs in an easterly direction to Elvista, Ala., and was constructed to reach coal mines in that district.

Graves branch, which leaves the Birmingham Mineral Railroad at North Birmingham, Ala., has been constructed, and extends in a northerly direction 2.62 miles to Graves mines.

Boyle's Gap branch, 2.08 miles in length, constructed during the year, leaves the Graves branch at North Birmingham and extends in a northeasterly direction to a connection with the South & North Alabama Railroad near Five-Mile creek.

The Deming branch, 1.73 miles in length, diverging from the Birmingham Mineral Railroad at Mattawana, Ala., and running in a westerly direction to stone quarries at Deming, Ala., has been constructed and is in operation.

There was also constructed during the year 5.63 miles of second track from Decatur, Ala., to Flint, Ala.

At Boyles, Ala., additional yards and a roundhouse have been constructed, representing 20.88 miles of additional track.

On the Cumberland Valley division, between Middlesborough, Ky., and Norton, Va., there is being constructed a branch line diverging from the main track at milepost 198 from Louisville, Ky., crossing the Cumberland river and extending for a distance of 2⅛ miles into coal property of the Bell-Jellico Coal Co. Grading for the entire line has been completed and track laid for a distance of 3000 feet to the river.

A branch known as the Pennington Gap line, connecting with the Cumberland Valley division at Pennington, Va., and extending up Powell's river to coal lands of the Black Mountain Coal & Coke Co., is under construction. Grading for the entire line, seven miles in length, is completed, and track has been laid for a distance of three miles.

There is also under construction 5400 feet of track diverging from the Cumberland Valley division at milepost 197 from Louisville for the Ely-Jellico Coal Co., in connection with its present system of tracks.

Other subordinate branches connecting with the Cumberland Valley division for the benefit of coal operators are in contemplation, representing about 11¼ miles of track, but plans for their construction are not yet matured.

The Knoxville, LaFollette & Jellico Railroad, diverging from our Knoxville division at Saxton, Ky., 198 miles south of Louisville, and extending to Knoxville, Tenn., has completed the construction during 1904 of its main line except one mile at Dossett. The total length of the line is 78.8 miles, and is located in Whitley county, Kentucky, 3.8 miles, and in Campbell, Anderson and Knox counties, Tennessee, 75 miles. It has also completed the construction of the following branches:

Cow Creek branch and loading spurs in connection therewith, 13 miles. This branch extends from Dossett via Oliver Springs into the coal fields north of the latter point, and is located in Anderson, Roane and Morgan counties, Tennessee.

Clear Fork branch, 6.1 miles, located in Campbell and Claiborne counties, Tennessee, and extending from Holton on the main line up the Clear Fork branch into the coal fields.

Hog Camp spur, 2.9 miles in length, located in Campbell county, Tennessee, and extending from a connection with the main line at Illford up Davis creek and up Hog Camp branch into the coal fields.

Second Creek, Third Creek and Dale Avenue spurs, representing 4.3 miles of track, which develop the industries in and about Knoxville, Tenn., have also been completed.

Of the main line, track was laid in 1903 on 17 miles adjacent to Knoxville and 8.7 adjacent to Saxton. The plans for 1905 contemplate the completion of the tunnel at Dossett and the laying of one mile of track, with the possible construction of two miles of coal spurs in the coal fields.

The Atlanta, Knoxville & Northern Railway Co. is rebuilding the first 60 miles of its line, extending south from Knoxville, Tenn., to Etowah, Tenn. The changes being made are so extensive as to make practically a new roadbed for the entire distance. Grading is being pushed rapidly by W. J. Oliver & Co., contractors, of Knoxville, Tenn. Tracklaying will probably be begun in March, 1905, and completed by July 1, 1905.

This company (the Atlanta, Knoxville & Northern Railway Co.) is also grading 87 miles of new line extending from Etowah, Tenn., to Cartersville, Ga., where connection will be made with the Western & Atlantic Railroad (N., C. & St. L. Railway) and with the Seaboard Air Line Railway. The last-mentioned work is being done by Wright, Williams & Wadley, contractors, of Birmingham, Ala. The tracklaying will probably be begun in May or June, 1905, and completed before the end of the year.

The officers of the A., K. & N. Railway in charge of this work are J. H. Ellis, Knoxville, Tenn., general manager; R. Montfort, Louisville, Ky., chief engineer; John Howe Peyton, Madisonville, Tenn., engineer of construction.

A New Line for Texas.

Mr. George M. Bowie writes from Weatherford, Texas, to the Manufacturers' Record concerning the proposed Chicago, Weatherford & Brazos Valley Railroad, saying: "We have the charter and field notes, with permission to issue the bonds, for a road 36 miles long from Weatherford to Bridgeport, connecting with the Rock Island Railway at Bridgeport, and the Texas & Pacific, Santa Fe and the Weatherford, Mineral Wells & Northwestern at Weatherford.

"No work has yet been done, and we are now trying to negotiate with some construction company."

STILWELL'S NEW LINE.

Hearty and Encouraging Expressions by One of the Recent Mexico Party.

Henry D. Estabrook, general attorney of the Western Union Telegraph Co., who was one of the party of Eastern and Western investors who went to Mexico as the guest of President Stilwell and other officials of the Kansas City, Mexico & Orient, has returned to New York, and is quoted concerning the trip and what was seen as follows:

"There is not a man in the party who has not returned fully convinced that the project is safe and sane, and one that will be of immense advantage to all concerned. We believe in Stilwell and his enterprises. I am firmly convinced that this trip will result in $1,000,000 being subscribed to the building of the road. There is not a man who went on the trip who did not either increase his former holdings of stock or become an original subscriber. They propose to back this project with their own money and to induce subscriptions from others.

"I am not ordinarily an enthusiast, but this trip to Mexico was a revelation. The development of that great country will surprise those most sanguine as to her future, and the trade relations that will follow the building of this railroad will astonish the most optimistic believer in the future of the two countries. At the very least, I would say that the trip made $1,000,000 for Mr. Stilwell. I must say one other thing. It is astonishing but most gratifying to note the esteem in which Mr. Stilwell and his associates are held in Mexico. We were received by President Diaz, and honors were showered upon us wherever we went."

The special train carrying the party left Kansas City November 25. The journey was made to the City of Mexico by way of San Antonio and Laredo, on the Missouri, Kansas & Texas. The party was in Mexico during the inaugural of President Diaz, and was made the object of special attention on the part of the Mexican government. They were given receptions at Chihuahua, El Paso and Wichita on the return trip. The party took a side trip to Guadalajara. They inspected the Orient lines in Mexico and also in Kansas and Oklahoma.

Buffalo & Susquehanna.

An interesting booklet describing and illustrating the Buffalo & Susquehanna Railway is issued by Messrs. Fisk & Robinson of New York and Boston. This railroad runs through an active industrial country developing coal, iron and timber property. The main line is 98 miles long from a connection with the Erie Railroad at Addison, N. Y., to Sinnemahoning, Pa., where it connects with the Pennsylvania Railroad. The line has several branches, one of which runs from Galeton, Pa., to Wellsville, N. Y., 37 miles, while there are also three other branches, one to Ansonia, another to Cross Fork and a third to Keating Summit. An extension from Sinnemahoning to Sykesville, Pa., is practically complete, and next year there will be completed the extension from Wellsville to Buffalo, N. Y. The pictures in the book afford its readers excellent information concerning the magnitude and activity of the industrial enterprises along the line, as well as of the country which it traverses. The reading matter gives detailed information concerning all of these industries, and also about the natural wealth of the regions in which they are situated.

ESTATOE ELECTRIC CO.

A 50-Mile Railway to Be Built From Asheville to Boonford, N. C.

Major George D. Miles, president of the Estatoe Electric Co., writes from Warsaw, Ind., to the Manufacturers' Record confirming the report that he has purchased the Asheville & Weaverville Railway, a proposed line in North Carolina, and says he is at present changing the grade, also extending the survey through to Yancey county.

Continuing, he says: "I intend building from Asheville on the Southern Railway to Boonford on the South & Western Railway, a road running out from Johnson City, Tenn. This line will be about 50 miles in length, will pass through Weaverville, Burnsville (the county-seat of Yancey county), Micaville, and so on to Boonford. We are building the road for freight principally, as there are vast quantities of timber that will come out over the line, besides minerals, of which there are vast quantities undeveloped. The engineer in charge is Mr. R. L. Dyer. We will commence work under our own supervision the first of the new year."

ANOTHER BIG BRIDGE.

Southern Pacific Plans Reported to Extend Further Eastward.

The Southern Pacific Railway, according to an article in the New Orleans Picayune, hopes to build a line from Lafayette, La., to Port Allen on the Mississippi river opposite Baton Rouge, La., a distance of 52 miles. This statement is credited to an official of the company, although his name is not mentioned, but who is also reported as saying that the company will not be satisfied until it secures outlets on the Gulf of Mexico at Gulfport, Miss., and Pensacola, Fla.

It is said that plans for a bridge across the river at Baton Rouge are already under consideration, and arrangements are reported made for the Gould lines, the Frisco system and the Missouri, Kansas & Texas Railway to also have use of the bridge. The official is further quoted as saying that every arrangement is being made by the company to build this proposed bridge, and that he thinks the plan will be financed in a short time.

MAY EXTEND TO BIRMINGHAM.

Tennessee Central Considering Plans to Build About 200 Miles.

It is reported from Nashville, Tenn., that the Tennessee Railroad Co. is considering plans for important extensions—one from Nashville, about 120 miles long, to Birmingham, Ala., and another from Crossville to Chattanooga, Tenn., about 70 miles. The report is accompanied by the statement that nothing definite has been decided concerning the question of making these extensions, but it is probable they will be built. It is said that options are held on a large tract of iron and timber land in Southern Tennessee and Northern Alabama, and that the proposed Birmingham extension would develop this property, also that the Chattanooga extension would open up another rich timber and mineral section.

To Locate Settlers and Industries.

Judge William G. Cochrane, who has just retired from the office of mayor of Tuscaloosa, Ala., has been appointed vice-

president and general agent, with headquarters at Healing Springs, Ala., in charge of the new department of the Tombigbee Valley Railroad, known as the land development and industrial department. Judge Cochrane, whose present address is Healing Springs, Ala., proposes to locate industries along the Tombigbee Valley line, which is now over 50 miles in length, and to bring immigrants and others to settle up the territory through which this line runs. The railroad connects with the Southern Railway at Calvert, Ala., 30 miles north of Mobile, Ala., and extends southeast to the Tombigbee river at tidewater and northwest through Washington county to the Choctaw county line, and passing through fine virgin pine forests which offers many locations for large and small industries. Besides this, there is a large acreage of excellent farming lands along this railroad which the industrial agent has in shape that he can offer great inducements to immigrants and homeseekers. Judge Cochrane has had much experience in this line, and his career as mayor of Tuscaloosa showed that he is alert to the advantages of his section and active in giving them the best development.

Little Rock & Monroe.

The Little Rock & Monroe Railroad is expected to open for traffic not later than February 1. The bridge across the Ouachita river will be completed this month, and all steel is laid with the exception of 14 miles from the river to Monroe. This road is controlled by the Union Saw-Mill Co. of Huttig, Ark., and runs from Felsenthal, Ark., to Monroe, La., a distance of 45 miles, through some of the finest timber lands in Southern Arkansas and the best plantation lands of Northern Louisiana. Connection is made at Felsenthal with the Eldorado & Bastrop Railway of the Gould system.

Hendersonville Street Cars.

Mr. W. A. Smith writes from Hendersonville, N. C., to the Manufacturers' Record as follows: "I am now at work constructing a street railway from Main street in Hendersonville to Laurel Park, a distance of about two miles. The survey has been made and the grading will begin tomorrow morning.

"The plans for extending this road via Mills River to Biltmore and from Hendersonville to Chimney Rock have not yet been perfected, though they are very much agitated, and these roads are confidently expected to be built."

Railroad Notes.

Mr. A. B. Sanders of Shreveport, La., writes the Manufacturers' Record that he and others propose to build an electric railway at Clarksville, Texas.

Mr. W. E. Christian, assistant general passenger agent of the Seaboard Air Line at Atlanta, is reported as saying that the company will begin to operate through passenger trains between Atlanta and Birmingham on January 9.

Mr. W. F. Stevenson, president of the Chesterfield & Lancaster Railroad, writes the Manufacturers' Record from Cheraw, S. C., that no plans are yet formulated for the extension of the Bennettsville & Cheraw Railroad. They are under consideration only.

Mr. B. F. Yoakum, chairman of the board of the Frisco system, has, according to a report from Orange, Texas, purcharsed a large amount of stock in the Orange & Northwestern Railway, and this, it is said, insures the extension of the line to Shreveport, La.

The Chicago & Alton Railway, according to a report from Kansas City, has purchased 42 acres of land there which will be used for improving its freight terminal facilities. About $200,000 will be spent immediately, but the total expenditures are expected to reach $500,000.

The Harriman lines, including the Southern Pacific, have, it is reported, awarded large contracts for motive power and rolling stock. These orders include 100 locomotives and over 3000 freight cars of various styles. About 1000 of the latter are to be used on the Southern Pacific.

A stockholders' meeting of the Atchison, Topeka & Santa Fe Railway is to be held on January 24 at Topeka, Kan., to take action on the proposed issue of $50,000,000 of convertible bonds, the proceeds of which are to be used for completing lines now under construction, to build additional branches and new lines, as well as second track, and to otherwise better the property. New equipment is also to be purchased.

A press dispatch from Philadelphia says that the Pennsylvania Railroad Co. has awarded contracts for 102,700 tons of steel rails to be delivered next year by various companies as follows: United States Steel Corporation, 55,500 tons; Lackawanna Steel Co., 7000 tons; Cambria Steel Co., 20,100 tons, and Pennsylvania Steel Co., 20,100 tons. The total value of these contracts is said to be between $2,500,000 and $3,000,000.

Commissioner of Labor William Anderson of Missouri reports that manufacturing enterprises of that State had in 1903 a total capital of $143,005,626, with an output valued at $311,074,256.

It is announced that the United States government has purchased the exhibit at the St. Louis Exposition of the Fairmont (W. Va.) Coal Co. to be used as a permanent exhibit.

Bankers of the Panhandle of Texas are discussing a plan for the establishment of a packing-house in that part of the State.

The Gray Manufacturing Co. of Gastonia, N. C., has awarded contract to the Westinghouse interests for a 600-horse-power steam turbine and a direct-connected generator and for a number of alternating current motors. This machinery will be used in the 10,000-spindle and 350-loom mill which the Gray Manufacturing Co. will build this coming spring. The company is capitalized at $150,000, and its president is George A. Gray. This enterprise was referred to last month.

The Salt Lick (Ky.) Woolen Mills Co., reported incorporated last month with capital stock of $40,000, has organized with C. C. Johnson, president, and M. F. Christian, treasurer. Woolen goods will be manufactured, but the erection of buildings will not begin until after the first of the year. Details as to the plant have not been decided.

The Centreville Warehouse Co. of Centreville, Ala., is now investigating relative to the establishment of the small knitting mill referred to last week. It invites correspondence from makers of knitting machinery as to the kind of goods it is advisable to manufacture, cost of the required machinery, etc.

The Riverside Manufacturing Co. of Anderson, S. C., has completed enlargements to its plant which about double the equipment, giving a total of some 21,000 spindles. Last March the company announced its intention to arrange for this improvement.

Messrs. L. S. Roan, H. L. Roan and B. S. Roan have incorporated the Fairburn Hosiery Mills of Fairburn, Ga., for the purpose of manufacturing knit goods.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

ENGLISH SPINNERS LOOKING UP.

Easier Conditions Have Developed Since September.

[Special Cor. Manufacturers' Record.]

Manchester, Eng., December 12.

The past year has been a very trying one for all connected with the business or users of American cotton in this country. Shortage of supply has seriously affected not only investors, but operatives, who have worked short time for fully the first eight months of the year. Still it may be said that the curtailment of the production of yarn advised by the Masters' Association at the close of last year has been the salvation of the trade by preventing speculations in the raw material from being too excessive. Yet to a very great extent the markets have been difficult to follow and dangerous to deal in on account of the violent fluctuations in Liverpool and New York raw-cotton values. Under these circumstances the returns of limited companies' profits and losses are not quite so bad as was feared some months ago. With a combined share capital of £3,418,919 a net profit of £31,729 has been earned, against a loss in 1903 of over £45,000. The average dividends of 2½ per cent. paid during the year show a falling off of over one-half per cent., but this is wholly due to the reserve funds available last year having become exhausted. It is pleasing, however, to be able to say that since last September the situation has entirely changed and capital is once more having a good return. It is no exaggeration to say that spinners for the past two months have been working with the best possible margin experienced for 25 years. With a plentiful supply of cotton and a scarcity of yarn it is strongly believed that this state of things will continue for some time to come. The profits earned since the improvement began are only slightly reflected in this review, as accounts here dealt with are only brought to the end of November, and the number of companies making up then is small compared with those due at the end of the year. If the market value of shares is anything to go by, some excellent profits will in the near future be announced. Shares generally give out their low-water-mark value in August, and since then they have gone up by leaps and bounds, and register advances of 10s. to 15s. per share. The outlook altogether for holders of this class of investments is cheerful. It is only a question of how long it will last.

The following table is a grand summary of 90 companies reduced to one huge mill:

Paid-up share capital	£3,418,919
Mortgages and loans	1,621,777
Total capital employed	£5,040,696
Net profits earned by 57 companies.	£84,921
Net losses made by 33 companies.	53,192
Balance of profits	£31,729
Average profit per company for 1904.	£352
Against average loss per company for 1903	503
The yearly net profit of £31,729 earned during the year by £3,418,919 of share capital works out to	1 per ct.
By drawing slightly upon the reserve funds, shareholders have received an average dividend of	2½ per ct.
Against payment in 1903 of	3 per ct.
43 companies have adverse balances.	£159,133
47 companies have credit balances.	56,596
Net adverse balance end of year	£102,537
Present book value of mills, machinery and motive power	£4,447,010
Total number of twist spindles	3,129,997
Total number of weft spindles	4,186,319
Total yarn-producing capacity	7,316,316

When working full time of 50 working weeks in the year the operatives' wages on above spindles average 3s. 3d. per spindle, or the total wages distributed would amount to £1,167,776, but this has been reduced by the short time worked for the first eight months of the year. Out of the past 21 years 15 have been profitable periods, the aggregate profits amounting to £2,689,798, and loss for the six years being £266,766, or a net profit earned of £2,423,032.

The Erwin Mill No. 2.

During the past two years the Manufacturers' Record has frequently referred to the big denim mill being built near Dunn, N. C., by the Erwin Cotton Mills Co. of Durham, N. C. It is especially interesting now to note that the plant is practically completed, and some of the machinery will be put in operation this month, and by the early spring the company expects to have 35,000 spindles and 1024 looms running. All the spinning and carding equipment has been installed. This initial plant will represent an investment of $1,000,000, and it is the intention to double the equipment in the future, the entire establishment being designed for that increase. Duke, the mill town created by this enterprise, is five miles from Dunn, N. C., on the Cape Fear & Northern Railway. It is located on a healthy plateau about one and one-half miles from Smiley's Falls, on Cape Fear river, and is an ideal site. Several hundred cottages, of better grade than generally given mill operatives, have been built for the employes. A bank is now being conducted, a church is being built, a department-store building, 100x100 feet, has been completed, with schoolroom and hall on second floor, and a graded school will soon be opened.

Large Addition Completed.

The Manufacturers' Record of September 1 contained the announcement that the Avondale Mills of Birmingham, Ala., had purchased and decided to double the capacity of the Central Mills at Sylacauga, Ala. Contracts for the engineering and architectural work were awarded to Messrs. T. C. Thompson & Bros. of Birmingham, and this work is now completed. The additional building is 100x330 feet in size, and by January 15 the 11,200 spindles to be installed will be in position. The cost of the enlargements amounts to about $125,000. Yarn is the mill's product.

The Athens Manufacturing Co.

The Athens Manufacturing Co. of Athens, Ga., was mentioned last week as proceeding rapidly with its modernizing improvements, which had previously been contracted for. By February 1 the manufacture of Nos. 20 to 30 single and ply skein and warp yarns will be begun, 10,000 spindles to be operated. An entirely new equipment for this 10,000-spindle mill has been purchased from Stuart W. Cramer of Charlotte, N. C. T. P. Vincent is president of the company, and A. D. Cheney is secretary.

Proposed 3500-Spindle Mill.

The Thomas P. Moore referred to briefly last week as proposing to build a cotton factory at Yorkville, S. C., is secretary of the Alpine Cotton Mills at Morganton, N. C., where he can be addressed. Mr. Moore has made a proposition to the business men of Yorkville for the organization of a stock company with capital stock of $60,000, but no definite arrangements have been completed. Mr. Moore contemplates that the plant be equipped with

3500 spindles for manufacturing low-grade cottons.

Athens Woolen Mills.

In its issue of November 24 the Manufacturers' Record referred to the Athens (Tenn.) Woolen Mills as doubling its output of 1000 yards daily. This statement was an error, the output having previously been 3000 yards daily, and the improvements to the mill increase that daily output to 6000 yards of jeans. The company increased its capital stock from $75,000 to $125,000 in order to make the improvements, including the installation of pickerhouse and dyeing department.

To Install 7000 Spindles.

In October the Manufacturers' Record referred to the organization of the Marion Manufacturing Co. of Marion, S. C., capitalized at $100,000. The company has now decided to build a mill of 7000 spindles and manufacture Nos. 20 to 30-ply yarns. It has secured a building, to which an addition will be erected, work having been begun last week. Steam-power will be used. By February 1 the plant is expected to be ready for operation. William Stackhouse is president.

For Batting and Wadding Mill.

A great amount of cotton batting and wadding is being used in the manufacturing department of the Martin Weiss Dry Goods Co. of Beaumont, Texas, and the company thinks of installing machinery to manufacture its own batting and wadding. Linters can be obtained at low prices from a neighboring town. The company informs the Manufacturers' Record that it is desirous of corresponding with makers of the necessary machinery for the purpose indicated.

The Cotton Movement.

In his report for December 16 Col. Henry G. Hester, recretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight in the 107 days of the present season was 7,196,142 bales, an increase over the same period last year of 1,105,574 bales. Exports were 3,809,851 bales, an increase of 586,099; takings by Northern spinners 993,550 bales, an increase of 136,918; by Southern spinners 803,051 bales, an increase of 71,386 bales.

Installing Additional Spindles.

The Edenton Cotton Mills of Edenton, N. C., has completed the erection of an additional building, 80x98 feet in size, and the installation of 2240 spinning spindles and 1120 twisting spindles, giving the plant a total of 8512 spinning and 1250 twisting spindles. There remains space in the new building for 2500 spinning spindles and 1250 twisting spindles, which machinery it is proposed to add in 1905. Warps and skein yarns are manufactured.

Wants Manager for Blanket Mill.

An exceptional opportunity in manufacturing is now open to a suitable man. The business is a blanket mill whose product is known all over the United States, and the present owners need the services of a competent man who has had sufficient experience to take the management of this enterprise and advance its interests. Address "Blanket," care of the Manufacturers' Record, and the letters will be forwarded to the millowners.

A 6000-Spindle Addition.

In June last the Manufacturers' Record stated that the Arcade Cotton Mills of Rock Hill, S. C., had decided to increase capital by $60,000 and add 6000 spindles. The company has since been erecting the required building, and completed it last week. Its machinery will soon arrive and be placed in position. Former equipment was 6100 spindles and 160 looms, manufacturing print cloths and converters' goods.

For a $50,000 Twine Mill.

A party of Atlanta capitalists desires to build a mill for manufacturing cotton twine from the waste of cotton yarn and cloth mill, and is desirous of obtaining complete equipment of machinery, buildings, etc. It is proposed to invest not over $50,000 to begin with. Manufacturers of cotton-twine machinery can correspond with the American Commission Co., 121 Whitehall street, Atlanta, Ga., regarding this proposition.

A Handkerchief Factory.

The Charlotte Handkerchief Manufacturing Co. of Charlotte, N. C., has been organized by J. B. Caudle of Rockingham, N. C., and will establish a handkerchief factory. A suitable building has been secured and contract for the necessary machinery has been awarded. Electricity will be the motive power. There will be 12 machines for producing hemstitched handkerchiefs.

Wants Southern Mill Products.

A prominent New England manufacturer who uses 20-2, 20-3, 24-2, 26-2 on tubes in good-sized quantities wants to correspond with Southern mills with a view of buying direct from them. Correspondence addressed to "New England," care of the Manufacturers' Record, will be forwarded.

Textile Notes.

The Laurens (S. C.) Cotton Mills has declared a semiannual dividend of 6 per cent.

The Anniston (Ala.) Knitting Mills will build an addition two stories high, 70x120 feet, plans and specifications having been obtained.

The Murfreesboro (Tenn.) Business League is considering a proposition from knit-goods manufacturers for the establishment of a knitting mill.

The Pell City (Ala.) Manufacturing Co. has completed the installation of 40 additional looms and has awarded contract for 60 more, which will give the plant a total of 772 looms. There are 21,600 ring spindles in position.

The Adams Knitting Mill of Gadsden, Ala., has ordered sufficient machinery to double its plant of 10 knitting machines, seven sewing machines, etc., manufacturing ladies' undervests. This plant was just established last month, as noted in this column at the time. The initial investment is $10,000.

QUOTATIONS OF COTTON YARNS.

By Paulson, Linkroum & Co., New York, Philadelphia and Chicago. December 20.

No. 10s-1 and 12s-1 warps	15½@16
No. 14s-1 warps	16 @16½
No. 16s-1 warps	16½@17
No. 20s-1 warps	17½@—
No. 22s-1 warps	18 @—
No. 26s-1 warps	18½@—
No. 6s to 10s yarn	15½@—
No. 12s-1	16 @—
No. 14s-1	16 @16½
No. 16s-1	17 @—
No. 20s-1	17½@—
No. 22s-1	18 @—
No. 26s-1	18½@—
No. 8s-2 ply soft yarn	16 @—
No. 10s-2 ply soft yarn	16½@—
No. 8s-2 ply hard	16 @—
No. 10s-2 ply hard	16¼@—
No. 12s-2 ply hard	16½@—
No. 14s-2 ply	17 @—
No. 16s-2 ply	17½@—
No. 20s-2 ply	18 @—
No. 24s-2 ply	19 @—
No. 26s-2 ply	19½@—
No. 30s-2 ply yarn	20 @20½
No. 40s-2 ply	24 @25
No. 8s-3, 4 and 5 ply	16 @—
No. 20s-2 ply chain warps	18 @—
No. 24s-2 ply chain warps	19 @—
No. 26s-2 ply chain warps	19½@—
No. 30s-2 ply chain warps	20½@—
No. 16s-3 ply hard twist	17½@—
No. 20s-3 ply hard twist	18 @—
No. 26s-3 ply hard twist	19½@—

Prices nominal.

COTTONSEED

Cotton Oil in France.

United States Consul A. M. Thackara at Havre, France, reports that the total imports of cottonseed oil into France during the first eight months of 1904 from the United States, as well as from other countries, show an increase over the imports of the same period in the two previous years, but that the oil has not been consumed very freely. He adds:

"A feature of interest in connection with the manufacture of vegetable oils in France is the falling off in the production of cottonseed oil in the republic. The importation of cottonseed, notwithstanding the bountiful cotton crop in Egypt, amounted to only 30,000 tons in 1903, against 48,000 tons in 1902 and 45,000 tons in 1901, and in the first eight months of this year to 13,800 tons, against 25,000 tons in the first eight months of 1903 and 35,600 tons in the same period of 1902. The few French manufacturers who in former days made a specialty of high-grade cottonseed oils probably do not find it easy to compete with the fine qualities of American oils. Besides, they are handicapped by the difficulty of disposing of their cake, which, unlike the American product, being in an undecorticated condition, does not find a ready sale to the French cattle-feeder.

"The bill for imposing duties on foreign oil seeds which are now on the free list and increasing those on foreign oils, which for a long time has been before the French Parliament and was supposed to be slumbering in the archives of the tariff committee, with little prospect of awakening, was unexpectedly brought into life again by sudden action on the part of its friends. They succeeded in getting the committee to pass a vote in favor of a duty of three francs (58 cents) per 100 kilograms (220.4 pounds) on colza seeds and a corresponding duty, according to their yield in oil, on all other oleaginous seeds. At the same time the existing duties on vegetable oils, including cottonseed oil, were raised to 12 francs ($2.32) per 100 kilograms. The duties on copra and palm kernels, as well as their oils, were not changed.

"Shortly after this decision of the tariff committee Parliament adjourned, and the bill will be reported back to the tariff committee, and then sent up to the Chamber of Deputies for discussion during the present session. It will certainly meet with much opposition from the French oil manufacturers, whose interests are seriously menaced by it; from those who are engaged in the oil-seed trade with British India, and from the importers of American cottonseed oil."

Cottonseed at Hull.

According to the Daily Mail of Hull, England, the center of the seed-oil business in that country, the trade in cottonseed oil is languishing because of American competition. It says:

"There has been a very heavy American cotton crop, and this will produce an enormous increase in cottonseed suitable for crushing, the result being that prices will be kept down. The Hull crushers are dependent for their supplies upon Egypt, but the growers there are holding the cottonseed with a view of squeezing the most they can out of their Hull customers. The consequence is that the cost of the raw material in Hull is so high that it is impossible to crush at a profit. The Americans are making the most of their chances by underselling the Hull merchants not only on the Continent, but actually in Liverpool and Glasgow. America's ability to dump its goods in England at a price at which even Hull is unable to compete—and this after paying freight—must give cause for reflection. It is hard that Hull should be shut out from continental markets, but that it is obliged to acknowledge its inability to hold its home markets shows conclusively that all is not well with the trade."

United States Consul Walter C. Hamm at Hull adds to that comment:

"American competition has been pressing closer and closer upon the seed-oil manufacturers in this city, and the condition here undoubtedly represents that in all England. The American seed-oil producers have the great advantage of being able to obtain their raw material at home and of having their mills equipped with the latest machinery, while the English seed-oil producers are compelled to obtain their raw material from Egypt. The cost of freight from that country more than offsets the cheaper cost of labor, and so enables the American manufacturer of seed oil to undersell his English competitor."

One hundred and twenty-five cotton-oil manufacturers of Texas have determined to try to hold all oils now in stock until the market shall improve. The oil will be stored at Dallas, Houston, Greenville and Sherman.

Looking for Immigrants.

Mr. J. L. Parkes, Jr., cashier of the National Bank of Franklin, Tenn., writes to the Manufacturers' Record as follows:

"I will very much thank you to tell me how I can get some immigrants here for farm work. I have read the article from South Carolina in this week's journal, but have received the impression somehow that by applying to some parties in New York I could get immigrants directed this way by advancing railroad fare. I want a man (preferably a Swede or Swiss) to take charge of a herd of milch cows, about 20 in the herd. I have not been able to find a competent negro for the place, and do not believe I can. Several of my neighbor farmers will give employment to others, and if you can give me any information along the line of how to secure the class of immigrants suited to my need of farming generally, I will sincerely appreciate and act upon the same. There is great need of more intelligent labor on the farms around here."

The Board of Trade of Tuscaloosa, Ala., has issued a pamphlet, with handsome illustrations, showing the advantages of that city and its neighborhood for the homeseeker, the investor and the manufacturer. Mr. F. G. Blair is president of the Board of Trade; Mr. E. N. C. Snow, vice-president, and Mr. P. W. Blondheim, secretary and treasurer. The committee under whose direction the pamphlet was published included Messrs. C. W. Weatherford, E. N. C. Snow, T. H. Garner, L. H. Maxwell and F. G. Blair.

In promotion of the plan for an inland waterway along the Atlantic coast a convention will be held at Columbia, S. C., December 28, and an effort will be made to secure the attendance of members of the rivers and harbors committee of the national House of Representatives.

It is estimated that the output this year of the quicksilver mines in the Terlingua district of Texas will reach a value of more than $1,000,000.

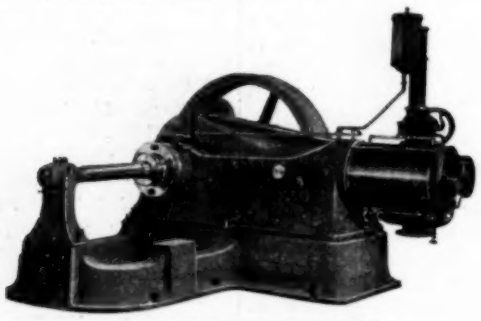
The Engineering Association of the South has elected as president Mr. J. W. Kendrick, city engineer of Birmingham, Ala.

The Alabama Car Service Association handled in November 59,067 cars, against 64,422 handled in November, 1903.

MECHANICAL

The Reeves Simple Engine.

Manufacturers and power-plant operators will find the accompanying illustration and diagrams of considerable interest. These refer to results of the tests of a Reeves Simple Engine by Prof. R. C. Carpenter, assisted by Prof. H. Diederichs, at Sibley College, Cornell University, Ithaca, N. Y. The purpose of the tests was to determine the steam consumption, mechanical efficiency and general behavior of the engine under various conditions of load. The report was as follows:



THE REEVES SIMPLE ENGINE.

The diameter of the cylinder is 15 inches, the stroke 14 inches. The steam valve is of the piston type, taking steam at the inside and exhausting from the outside edge. Adjustments are provided whereby the ends of the valves may be expanded to stop leakage of steam should this become necessary through wear. Both ends may be adjusted from one end, thus necessitating the taking off of only one valve-chest cover. Cylinder and valve chest are well lagged. The frame is of an approved type with sub-base, the cylinder bolted on, the whole machine being an extremely rigid construction. The main bearings and the pin bearings are large, and lined with the best quality of anti-friction metal. This insures low bearing pressures and good lubrication. All of the rubbing surfaces are lubricated from a gravity central-oiling system. The oil tank is fastened to the main steam pipe, and from it leads a pipe which, by branch pipes supplied with sight-feed devices, furnishes oil to the three valve-guide oilers, to the main bearings, the crankpin, and, by means of a wiper, to the wristpin. The oil for the crankpin is taken in through a groove on each side of the crank discs, is led to the inside of the pin, and from there to the bearings. By this arrangement only one valve, that leading from the tank to the main oil pipe, needs to be handled each time. Governor-pin and eccentric strap are oiled by means of grease cups. Cylinder lubrication is taken care of by sight-feed oiler and hand pump.

All of the adjustments on this machine are easily made, and after everything was put in good shape no trouble was experienced through heating or otherwise under any load the engine was able to carry.

The engine was furnished with two fly-wheels for the purpose of this test. One contains the automatic governor of the Rites type, the other was used for the application of a Prony brake to furnish the desired load.

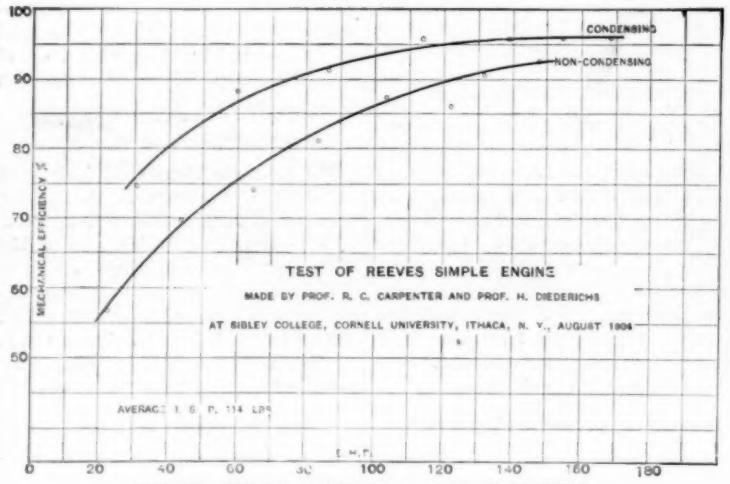
The engine was connected through about 25 feet of four-inch pipe to a battery of two B. & W. boilers. The machine calls for a five-inch steam pipe, but a four-inch was the largest available, so that under the high loads some wire-drawing became noticeable. The exhaust was connected through about 20 feet of seven-inch pipe to a Wheeler surface condenser. The steam after being condensed was pumped by the air pump to a couple of tanks on the floor above and weighed, the steam used by the engine being thus accurately determined.

Two series of runs were made, the one non-condensing, the other condensing. For the former the air-cock on the condenser was left open, thus insuring condensation under atmospheric pressure. For the latter this was closed, and the runs were made under a vacuum as high as could be obtained. This was found to be about 23.5 inches. For each series a number of runs were made, varying from friction load to approximately 25 per cent. overload. The duration of these runs varied from one to two hours each, depending upon the constancy of the various observations. Only one run, that of the condensing overload, was shorter, owing to signs of weakness in the brake. The observations taken were as follows:

Weight of condensed steam by weighing air-pump discharge. The condenser itself was found to be tight.

The load was applied by means of a Prony brake of common design. The arm of this brake was eight feet six inches, the zero-reading on the scale being 47 pounds. It was kept lubricated with a steady small stream of cylinder oil, and kept cool by running water into the wheel rim and scooping it out. Except for a little weakness in the arm, this brake carried the load easily. During any one run the scale was set to a certain desired weight, and the scale beam kept floating during the run.

Speed was observed by means of a continuous counter and by hand counter as a check. The continuous counter-readings were used in the computations.



REEVES ENGINE—AVERAGE I. S. P. 114 POUNDS.

A throttling calorimeter to determine the quality of steam was connected to the steam pipe just below the throttle. The quality of steam was high throughout, owing to the fact that one boiler gave superheated steam.

The other readings taken were those of steam pressure at the throttle, temperatures of injector water, inlet and outlet, and that of condensed steam. All of these readings were taken every 10 minutes, except those of weight of condensed steam, for which at the high loads a change of tanks was necessary every five and sometimes every four minutes.

Indicator cards were also taken every 10 minutes. The indicator used was a Thompson of the latest design. The motion was taken from the crosshead, reduction being made through a reducing wheel. Springs used were 80 pounds on all the runs but the friction condensing, where a 40-pound spring was employed.

All of the observed data and the results of computations will be found on the accompanying log and result sheets.

The indicated horse-power was found from the formula:

$$\text{I. H. P.} = \frac{p\ l\ a\ n}{33000}$$

where p = mean effective pressure.
l = piston travel in feet.
a = area of piston in square inches.
n = r. p. m.

The indicator cards taken during any one run were all integrated, and from the areas the mean pressures were determined. The 80-pound spring was on calibration found to be correct, while the 40-pound spring was somewhat weak, as the attached calibration sheet shows. The last sheets of this report show sample indicator cards, one being selected from each run.

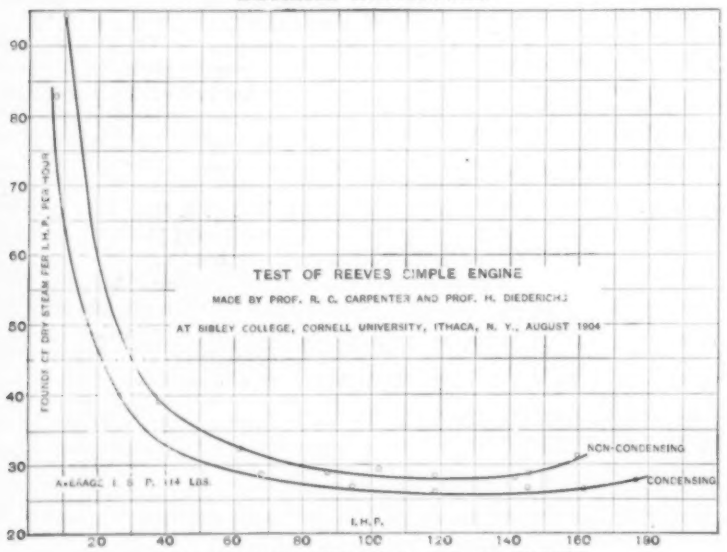
The developed horse-power was found from the formula:

$$\text{D. H. P.} = \frac{2\ p\ g\ a\ n}{33000}$$

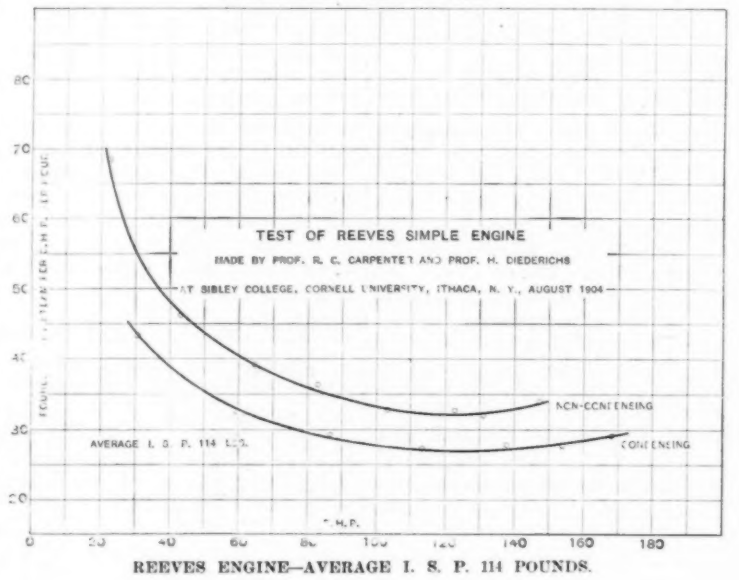
where g is the effective load in pounds.
a is the arm of brake in feet.
n is the R. P. M.

The most important result, the steam consumption, is computed for the I. H. P. and the D. H. P. per hour on the basis of dry steam. This, with all the other results, will be found on the attached result sheet.

In order to present the results at a glance, three sheets of curves are appended. The first shows the pounds of dry steam per I. H. P. per hour. This



REEVES ENGINE—AVERAGE I. S. P. 114 POUNDS.



REEVES ENGINE—AVERAGE I. S. P. 114 POUNDS.

decreases steadily from a friction load until it reaches its minimum of about 26 pounds of dry steam at about 130 I. H. P. for the condensing runs and about 28 pounds at the same load for the non-condensing series. With a higher load there is a small increase in the steam consumption, giving about 27.5 pounds at 176.3 I. H. P. condensing and about 31.3 pounds for 159.2 I. H. P. non-condensing. The remarkable part about these results is the nearly constant steam consumption of this

engine on the I. H. P. when running condensing. At 80 I. H. P. this is about 27.2 pounds; it drops to about 26 pounds at 130 I. H. P., and rises again to 27.5 at 176.3 I. H. P., giving a nearly constant range from 40 per cent. underload to about 40 per cent. overload.

The second sheet shows the dry-steam consumption per D. H. P. These curves are similar to the preceding ones, the best consumption being about 27 pounds at 130 D. H. P. condensing and about 31.9 pounds at 130 D. H. P. non-condensing.

The third sheet shows the relation between the mechanical efficiency and the D. H. P. The results are excellent. The highest efficiency reached non-condensing is 92.5 per cent. at 147.1 D. H. P. and 159.2 I. H. P. For the condensing series the results are still better. The best figure is 95.8 per cent. at 154.1 D. H. P. and 165 I. H. P., but the mechanical efficiency already reaches 90 per cent. at 78 D. H. P., reaches 95 per cent. at 133 D. H. P., and remains nearly constant from there up to the highest load, 168.2 D. H. P.

The Reeves Engine Co. of Trenton, N. J., builds the Reeves Simple Engine; sales offices at 85 Liberty street, New York city.

Rex Flintkote Roofing.

One of the most unique and attractive exhibits at St. Louis was that of Messrs. J. A. & W. Bird & Co. of Boston and New Orleans. Their exhibit was of Rex Flintkote Roofing—well known throughout the South. An accompanying illustration shows the exhibit—a circular building, 20x20 feet, surmounted by a curved dome 20 feet high. This dome was covered with Rex Flintkote Roofing, laid exactly as it would be on an ordinary roof. Over this dome water flowed in a continuous spray continuously 10 hours a day for six months, thus proving the waterproof quality.

Rex Flintkote Roofing is made of the best wool felt, saturated with compounds which contain no tar, and the whole is designed to stand the continual wear of the elements and give the greatest resistance to water, chemical fumes, etc.

To test this still further, the floor of the exhibit was covered with Rex Flintkote Roofing. The booth had three doors, and it was estimated that over 750,000 people went through the booth from one door to another, but on examination the roofing was found in absolutely perfect condition. Specimens of this used roofing will be sent to anyone who cares to examine it.

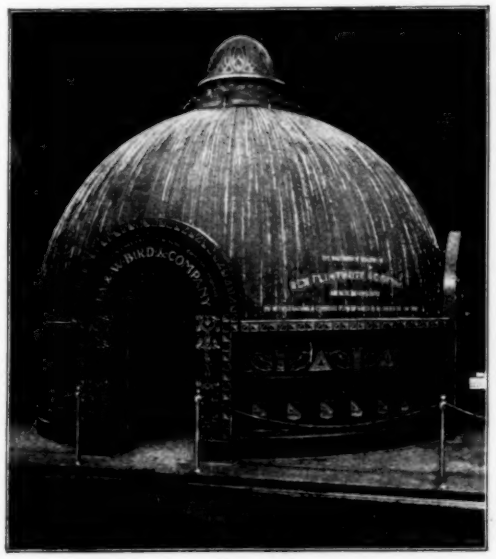


EXHIBIT OF REX FLINTKOTE ROOFING.

Rex Flintkote Roofing was awarded the grand prize at St. Louis. This is the highest award, necessitating over 95 per cent. of perfection.

The roofing was used on many buildings of the exposition to protect millions of dollars' worth of exhibits. There is probably no test that is so severe on a roofing as that of enormous buildings of this nature, which are built of such light and flexible construction. Over 45 carloads of Rex were used.

The new terminal depot at Atlanta is taking over 2000 squares of Rex.

The Ibex Insulating and Building Papers, also manufactured by J. A. & W. Bird & Co., were likewise awarded the grand prize.

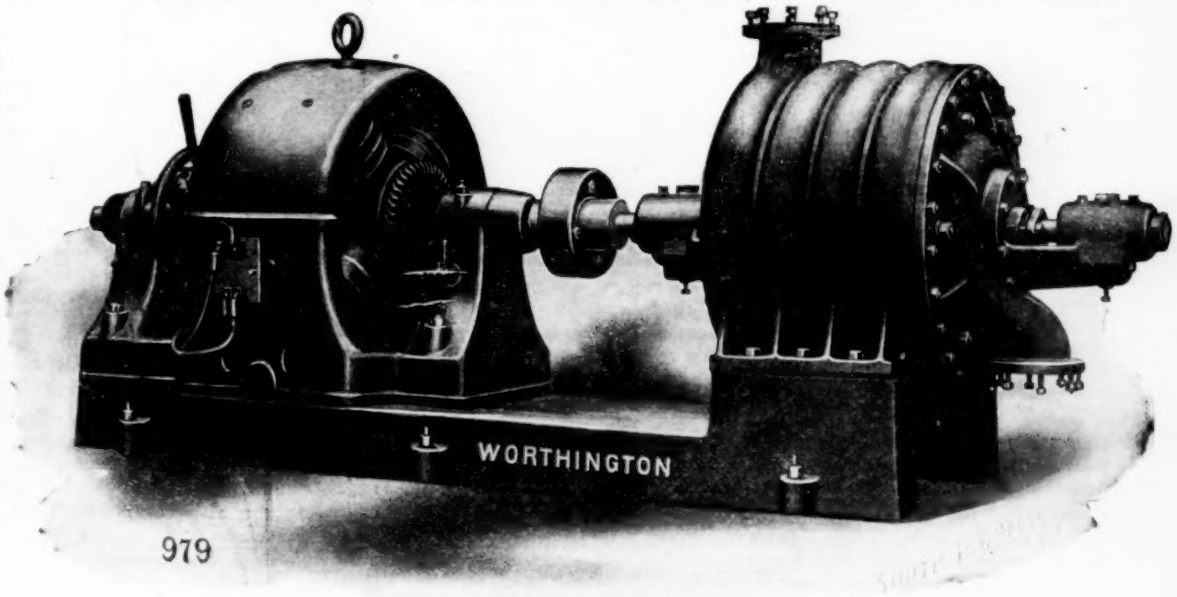
Worthington Centrifugal Pumps.

Few problems in the field of hydraulics present more interesting problems and at the same time have been so universally neglected as centrifugal pumping. Among the prominent manufacturers who have given this fact consideration is one that is known all over the world—Henry R. Worthington of New York. In addition to the fact that this company has entered upon the extensive manufacture of centrifugal pumps of novel and improved design and adapted to every purpose and condition of operation for which pumps have been used, attention is directed especially to the Worthington turbine pump, and an accompanying illustration presents a view of the machine. This machine is in construction the converse of the reaction turbine water-wheel. It makes possible the attainment of high heads by centrifugal pump with good efficiency. It is now for the first time introduced in this country, and a description of it will doubtless interest many of the Manufacturers' Record's readers.

The Worthington turbine pump has been developed by a long series of experiments conducted by able engineers under the direction of the foremost specialist in this field. The diffusion vanes, which form the distinguishing feature, take the place of the usual whirlpool chamber in other forms of centrifugal pumps and assist in bringing the water to rest without internal commotion or shock. They correspond in function to the guide vanes of turbine water-wheels. One of the difficulties presented by high-lift centrifugal pumps has been the great peripheral speed required when only a single impeller is employed. This has been overcome in the Worthington multi-stage turbine pump by mounting a number of discs or impellers, each operating in a separate chamber, upon a single shaft and passing the water through the impeller chambers in succession. The lift can thus be multiplied three, four or five times, while the number of revolutions is kept within such bounds that it is possible to connect the pump directly to a steam engine or an electric motor. It has been demonstrated by experiment that on the same work and within reasonable limits multi-stage centrifugals are more efficient than single-stage pumps, the increased efficiency being due to a decrease in the frictional losses coincident with the reduced peripheral speed of the impeller.

Particular attention has been devoted to the mechanical details in order to produce a machine that would withstand the most severe service for long periods of time without renewals or repairs. The bearings, of liberal proportions, are supplied with ring oilers and are lined with the best quality of babbitt, hammered in, reamed true and scraped to a perfect fit. In all except the very small sizes these bearings have been entirely separated from the pump casing, an improved form of construction effectually eliminating all possibility of foreign matter working into the bearings when the pump is handling water containing silt or sand. This construction further makes it possible to renew the bearings without entirely dismantling the pump, and will meet with the approval of all engineers familiar with centrifugal or rotary pumps. The shafts are of machine steel. They are mathematically accurate and straight and are perfectly polished.

The usual method of compounding hitherto practiced by manufacturers has consisted in combining separate pumping units, one discharging into the other through a complex system of piping. Henry R. Worthington deemed this so inefficient as to preclude its use in connection with the Worthington turbine pump, on which only suction and discharge pipes are employed, the water entering axially and issuing radially. The impellers remain in perfect longitudinal balance regardless of their number or the head against which the pump is operated, this balancing of the impeller being secured by an ingenious patented system of "triple vanes."



WORTHINGTON FIVE-INCH FOUR-STAGE TURBINE.
Station Pump in a Gold and Silver Mine. Capacity 500 Gallons per Minute Against 520 Feet Head.

In order to produce an efficient high-lift centrifugal pump the design must be such as to bring about nearly complete conversion of the kinetic energy of water in motion into potential energy of water under static head. Remembering that the so-called "whirlpool chamber" in the ordinary form of centrifugal pump does not average more than six inches in depth, and that in this space the velocity must frequently be reduced from 80 feet per second to 10 feet per second, it is obvious that the open-chamber construction is unsuited for high-lift service.

WORTHINGTON 12-INCH VERTICAL VOLUTE PUMP.
Pumping Sewage at Exposition in St. Louis. Designed for Direct Connection to a Vertical-Shaft Motor. Capacity 3000 Gallons per Minute Against 60 Feet Head.

In the Worthington turbine pump the efficient conversion of energy is assured by a patented system of diffusion vanes disposed in the throat opening between the periphery of the impeller and the annular casing in much the same manner that guide vanes are placed in a reaction turbine water-wheel. These vanes form tangential expanding ducts from which the fluid emerges at about the velocity existing in the chamber. They also eliminate all drag and friction between the peri-

phery of the rapidly-revolving impeller and the slowly-moving water in the discharge chamber.

The Worthington turbine pump has created an entirely new field of application for centrifugal pumps, embracing mine drainage, water-works and numerous other services where rotary pumps are desirable, but have not been employed owing to their former poor efficiency at high heads.

As a sinking or station pump for mine service the turbine pump is ideal. There are no valves, guards or springs, no reciprocating parts, and, most important of all, there is not a contact surface in the entire machine except the shaft and its bearings. The design is such that parts subjected to the action of mine water may be made of acid-resisting metal, and, when desired, lead-lined pumps will be supplied. The space occupied is less than one-third of that required by a reciprocating pump of equal capacity, and the first cost, including the motor for driving, is only about one-half. Since there are no rubbing surfaces exposed to the water, the pump will run for years without renewal or repairs. In case of accident, the parts are so few and the construction so simple that any part of the machine can be replaced in less than one hour. The cost of attendance is reduced to the minimum, since the only necessary attention is to see that the pumps and motors are properly lubricated. The simplicity and reliability of the centrifugal pump make it especially suitable for isolated stations.

The turbine pump is adapted to be driven by either an electric motor or a steam engine, but the former is much preferable for mine service, as it eliminates heat, avoids the use of condensers, occupies less space, requires less attention and is more efficient. Special motors are not required for direct-connected work, the range of patterns being so large that it is possible to adapt the pumps to any motor of standard speed. Either direct or alternating current motors can be used, and the pumps can be started against full-delivery pressure without the use of special starting devices. Where power-driven pumps are applicable, the turbine pump will be found eminently satisfactory. Worthington turbines are daily supplying water for steel plants, water-works, elevators and other services where the average water pressure exceeds 125 pounds per square inch.

In addition to the turbine pump a complete line of low-lift centrifugals has been developed, and patterns of high-efficiency machines for all conditions of service are kept on hand.

The International Steam Pump Co., 114 Liberty street, New York, will send to inquirers a publication giving complete descriptions and illustrations of these new Worthington pumps.

The Citizens' Alliance of Joliet, Ill., has issued an artistic folder illustrating by succinct text and halftone cuts the advantages of the city for manufacturing, one of the main points made being the existence of the Citizens' Alliance, "an association of merchants, manufacturers, professional men and many of the most intelligent workingmen of our city, who are organized to see that the laws of our country are enforced, thereby securing industrial peace, the greatest blessing any community can enjoy."

"Nashville, the Progressive City of the South," is the title of an artistic pamphlet in folder form published by the Chamber of Commerce of that city. A bit of history is followed by facts about the city's financial, commercial, industrial, educational and home life, with suggestions of value to wide-awake men who wish to live or to make investments there.

FOREIGN TRADE

Trade With Egypt.

The American Manufacturers' Agency, P. O. Box 589, Alexandria, Egypt, writes to the Manufacturers' Record as follows regarding a plan to further the introduction of American goods into Egypt on a much larger scale than at present:

"We have now been working for two years, and experience has taught us that the original idea of keeping samples in a showroom and selling on these to retailers for direct importation will never do in this country. It has also taught us that the keeping of a stock to supply the consumer direct is the only successful way of carrying on this business and furthering the interests of American manufacturers. This latter plan we have been following on a small scale for a year past, and find it so successful that we intend, with the co-operation of such manufacturers who will put their faith with us, to go into this thing on a larger scale.

"But, in the first place, we must have time. We cannot possibly get on by paying cash in New York before the goods have even been shipped. We must have time, as we must be able to give time.

"The fact is that European manufacturers deal direct with the retailers here, giving them 6 to 12 months' credit. We must therefore be in a position to offer the same terms, and we can only do so with the help of the various manufacturers.

"The field is a good one for American goods. We are Americans, and the only real American concern in Egypt. We mean business more than ever before, but we have not the means, and are not financially strong enough to work this increased business on a cash basis, but if such manufacturers in goods we enumerate in these lines are interested in opening up a steady field or market for their respective products, we are the ones to do it for them, but not without their coming halfway. We do not ask them to go to any expense or risk; all we ask for is time. They can also at first put a limit on their credit, which we will not exceed. We will buy on six months' terms—i. e., they can draw on us at six months' date from bill of lading's date.

"What we intend doing is to open up showrooms in Cairo and enlarge our premises here, and advertise largely on the American plan, which is a great novelty here.

"There is no question as to our success, as we have already had this up to the present, but, of course, only on a small scale. We could, we are positive, make a fair turnover in such lines as follow, all of which we have handled to some extent for the past years:

"Roll-top desks, low and medium grades furniture, especially cheap chairs; Morris chairs, refrigerators, safes, cheap and skeleton make; shells and all goods, such as guns, etc., for sporting purposes; typewriters and supplies, American shoe leather, sewing machines, plows, office furniture, freezers, trunks, hardware of all kinds, machinery and agricultural implements, especially mowers and reapers; soaps, American sail duck, phonographs.

"We could also easily introduce whiskies, mineral waters and beer, but would only care to handle that later on.

"The right cotton gin and steam plows, if gone about in the right way, could also be placed, besides numerous other small articles, and then novelties of all kinds, amongst which principally we would mention cash registers.

"We have already written to many manufacturers where we have shown results and have exclusive agencies, and have favorable replies from some. If from others we do not hear, we cannot help if they should feel prejudiced that we should discontinue with them should we have success, as we desire through your medium; but those who have replied favorably will, of course, get our preference."

American Goods in Brazil.

Vasco Azambuja of Rio Grande do Sul, Brazil, writes to the Manufacturers' Record as follows:

"My principal business is the sale of drugs and chemicals, and my importation is mostly done from European markets. Business in South Brazil is fairly good, and American firms could do more than they are doing if they would send their travelers down here or have agents in charge of their interests. Very much cement, zinc, tiles, barbed wire and kerosene is sold, and, in smaller quantities, hardware, tinware, etc. Most of the importation is done through Germany, owing to the great facilities in transportation by direct lines from Hamburg."

Will Display American Goods.

David Brown & Co. of Sydney, N. S. W., write to the Manufacturers' Record that owing to the extensive business with the United States from the Commonwealth of Australia, which trade is annually increasing, they have decided to add to their business an agency branch with extensive showrooms for the purpose of displaying and selling all classes of goods made by American manufacturers.

Notes.

Ignacy Berliner of Lodz, Russia, writes to the Manufacturers' Record that he desires to get into communication with American manufacturers of parts of typewriting machines, such as type, type indicators, gum bands, etc.

Robert Ganz, No. 82 Kaiser Wilhelmstrasse, Hamburg, Germany, writes to the Manufacturers' Record that he desires to make connections with American planters, manufacturers and shippers of lumber, rosin, shells, cotton-waste and other products of the South.

Working for the South.

[Felsenthal (Ark.) Press.]

What the Manufacturers' Record of Baltimore, Md., is doing for the South in the way of advertising her advantages and resources should be repaid by the manufacturers and business men by an ever-increasing subscription list. It is a publication that is well worth twice the price asked for it.

Acquiring Timber Land.

The Union Saw-Mill Co. of Huttig, Ark., has just closed a deal with the Pine Hill Lumber Co. of Monroe, La., whereby it acquires 30,000 acres of fine pine timber located near Monroe on the Little Rock & Monroe Railway. This company has also recently purchased from the Railroads' Land Co. of Monroe 3300 acres of fine pine timber land, in fee simple, known as the V., S. & P. Railway lands, in the same locality. With these recent purchases the company controls over 90,000 acres of the finest pine timber land in the South, and has one of the most up-to-date saw-mills in the country, cutting on an average of 200,000 feet of lumber daily. The officers of the company are C. D. Johnson, president; E. A. Frost, vice-president; F. W. Scott, secretary; A. W. Corkins, general superintendent. The St. Louis office is 716 Equitable Building.

L. T. Davidson of Glasgow, Ky., according to a dispatch from that place, has recently purchased all the oak lumber on that market with the exception of one firm's holdings, and has also made deals in nearby towns.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Baltimore Lumber Exchange.

At the annual meeting of the Lumber Exchange of Baltimore the officers elected were as follows: President, Norman James; vice-president, Samuel C. Rowland; treasurer, Parker D. Dix; managing committee, Richard W. Price, Samuel P. Ryland, Jr., Lewis Dill, William M. Burgan, Samuel C. Rowland, John L. Alcock, Theodore Mottu, Edward P. Gill, Henry P. Duker, George F. Sloan, G. W. Eisenhauer and John T. Galvin.

President James, in his review of conditions, said:

"Owing to the confusion incident to the fire—the congested condition of the wharves, railroad terminals and retail yards for a long period after the fire, caused by the unavoidable delay in building operations—it has been difficult this year to obtain reliable information as to the receipts of lumber at Baltimore. The receipts naturally have been large, and the present stocks, though much reduced, are fully equal to all needs. The entire trade has suffered from the drop in prices which occurred in the spring, when most of the dealers had stocked up in anticipation of an unusual demand. This was brought about by the condition of trade generally in lumber as well as in other commodities over the entire country, but especially on the Atlantic seaboard. These conditions have now changed. The mill man is busy with orders ahead and at constantly advancing prices; the stocks at Baltimore are considerably reduced, and are now well cared for, so that the outlook for the Baltimore dealer for winter and spring business is most encouraging in view of the fact of the immense amount of building still to be done in the burnt district, the great municipal improvements already under way, as well as those seriously contemplated, together with the fact that repairs and improvements throughout the city and suburbs seem to be starting up in an unusually vigorous way. Our Exchange has had a busy and successful year. Our membership has increased from 61 to 64 firms, and embraces practically the entire lumber trade of the city."

Alabama's Timber Resources.

In the memorial presented to Congress by the Alabama River Convention which recently met at Montgomery, Ala., to induce action by Congress for the full improvement of the Alabama river, the statement is made that last year in 27 counties of Alabama more than 1,000,000,000 feet of yellow pine, valued at $14,000,000, was cut. Nine counties contiguous to the Alabama river produced about a third of the cut, and timber men who are familiar with the timber resources of these counties estimate that there are more than 950,000 acres of timber, pine and hardwoods, still standing in these counties, from which can be cut at least $50,000,000 worth of timber. The argument is that an immense tonnage of timber remains to be developed as an adjunct to the improvement of the river, and that the cleared land will become available for agriculture, which in turn will yield an immense tonnage for river transportation.

Pine at Liverpool.

In their monthly circular Duncan, Ewing & Co. of Liverpool report that in November the imports of hewn pitch pine were 43,000 cubic feet, of sawn 95,000 cubic feet, and of boards and planks about equal to the consumption.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

BALTIMORE BUILDING NOTES.

Business Buildings.

Baltimore — Warehouse.—Alexander Yearley & Sons, Builders' Exchange Building, 2 East Lexington street, as agents for Mrs. Lydia H. Howard and Miss Mary W. Davis, have awarded contract to John Cowan, builder, 106 West Madison street, for the construction of warehouse to be located at Water, Calvert, Cheapside and Lombard streets, after plans and specifications by Ellicott & Emmart, architects, Union Trust Building, Charles and Fayette streets. Structure to be six stories high, 33.4x103.8 feet; red and light brick with terra-cotta trimmings; concrete foundation on piling; steel girders and columns; slag roofing; galvanized-iron cornice and skylight; vault lights; electric wiring and fixtures; sanitary plumbing. Heating system and two power elevators not included in contract. This building previously mentioned.

Baltimore—Warehouse.—The date for submitting the estimates on construction has been set for December 28 for the warehouse for Wm. H. Dix, 9 East Lombard street, as agent, to be located at southeast corner of Lombard and Charles streets, after plans and specifications by Wm. J. Beardsley, architect, 28 West Lexington street. Full details concerning the building and the names of builders estimating were recently mentioned.

Baltimore—Storage Warehouse.—The Security Storage & Trust Co., 11 and 13 West North avenue, has awarded contract to B. F. Bennett, builder, 123 South Howard street, for the construction of warehouse to be located in the rear of its present building. Structure to be seven stories high, 26.4x64.8 feet; brick with stone trimmings; concrete foundation; reinforced concrete floors; elevator; cost to be about $25,000.

Baltimore—Club Building.—L. P. Henninghausen, 215 St. Paul street, and other members of the German Society of Maryland are contemplating the erection of a clubhouse to be located in the burned district.

Baltimore — School Building. — Proposals will be received by the Board of Awards at the office of the City Register, City Hall, for school building to be erected at corner of Hollins and Amity streets, until 11 A. M., December 28. Structure to be two stories high with basement, 54x78.4 feet; brick with galvanized-iron trimmings; concrete foundation; steel beams; tin roofing; metal ceilings; gas fixtures; sanitary plumbing. Heating system not included in contract. Plans and specifications may be obtained from the office of the Inspector of Buildings, City Hall.

Baltimore—Store Building.—Isaac Hamburger & Sons, retail clothiers, Howard and Baltimore streets, have decided to invite a number of architects to submit competitive designs for their building to be located at northwest corner of Baltimore and Hanover streets. The cost of the building will be about $150,000.

Baltimore—Municipal Buildings.—The Center Market Improvement Commission, composed of Felix Agnus, chairman, Hoen Building, 302 East Lexington street; Frank Furst, Fidelity Building, Charles and Lexington streets; Henry Clark, president National Howard Bank, Howard and Fayette streets; Mayor Timanus, City Hall, and City Comptroller Heffner, City Hall, have decided to invite local architects to submit competitive designs for market buildings to be located on Center Market Space; $435,000 has been appropriated for the work.

Baltimore—School Buildings.—The Municipal Board of Awards, City Hall, has rejected all of the estimates submitted for the construction of the two four-story schoolhouses to be located at corner of Ramsay and Pulaski streets and Lakewood avenue and Oliver street, as all bids were outside of the appropriation. The plans and specifications will be revised, when new estimates will be received. These buildings previously mentioned.

Baltimore—Fire-department Building.—The Municipal Board of Awards, City Hall, has awarded contract to Frederick Decker & Son, builders, 1209 East Biddle street, for the construction of building for the fire department to be located at corner of Harford avenue and Oliver street after plans and specifications from the office of the inspector of buildings, City Hall. Structure to be two stories high, 48x78.4 feet; Roman brick with granite base and ornamental terra-cotta trimmings; concrete foundation; steel beams and girders; cast-iron columns; tin roofing; vitrified-brick pavement; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost to be $26,100. This building previously mentioned.

Baltimore — Restaurant. — Peter S. Flynn, manager of Green's Hotel, Philadelphia, Pa., has purchased the restaurant located at 12 and 14 East Pratt street for about $40,000. The present structure is three stories high, 36.8x40 feet, and, in addition to remodeling the old building, Mr. Flynn will extend the present structure back 118 feet. The plans and specifications covering this work will be prepared by an architect who has not as yet been selected.

Baltimore—Church.—The Seventh Baptist Church, Charles T. Bagby, chairman of the building committee, Central Savings Bank Building, 3 East Lexington street, has awarded contract to D. W. & G. H. Thomas, builders, 419 North Charles street, for the construction of church building to be located on northwest corner North avenue and St. Paul street after plans and specifications by Edward H. Glidden, architect, Wilson Building, 301 North Charles street. Structure to be one story high with basement, 69.2x79.7 feet, tower 129 feet high; Beaver Dam marble exterior; concrete foundation; steel beams and columns; cast-iron columns; slate roofing; electric wiring and fixtures; sanitary plumbing and heating system. Cost of building to be about $60,000. This building previously mentioned.

Baltimore—Dwellings.—Henry E. Cook, 500 East Monument street, has purchased the property located at southeast corner St. Paul and 27th streets, and will erect 12 three-story dwellings on the site, which has a frontage of about 200 feet.

Baltimore—Warehouse.—Walden C. Nimmo, 327 North Calvert street, will, it is reported, award contract to the Charles McCaul Company, builders, 123 West Saratoga street, for the construction of warehouse to be located at 109 and 111 Cheapside after plans and specifications by J. E. Laferty, architect, Builders' Exchange Building, 2 East Lexington street. Structure to be four stories high, 42x66 feet; brick with granite base and stone trimmings; concrete foundation on piling; steel beams; tin roofing; vaults; metal frames and sashes glazed with wireglass; copper cornice; sanitary plumbing; two hand elevators. This building will be occupied by W. C. Nimmo & Co., tinplate dealers, temporarily located at 327 North Calvert street. This building previously mentioned.

Baltimore—Dwellings.—George A. Cook, 435 East 25th street, has purchased the property located on west side of Washington street between Lanvale street and Lafayette avenue, and will erect a number of two-story dwellings on the site, which has a frontage of 165 feet.

Baltimore — Store Building. — Further details have been obtained concerning store building for the Wm. Keyser estate, R. Brent Keyser, trustee, 14 East Mt. Vernon Place, to be located at southeast corner Charles and Fayette streets after plans and specifications by Wyatt & Nolting, architects, Builders' Exchange Building, 2 East Lexington street. Structure to be six stories high with basement, 30x90 feet; brick with terra-cotta trimmings; concrete foundation; steel beams; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator. Cramp & Co., 407 St. Paul street; Wm. Steele & Sons, 17 West Saratoga street; Henry Smith & Sons Company, 116 South Regester street; J. H. Miller, 110 Dover street; John Cowan, 106 West Madison street; Morrow Bros., 212 Clay street; B. F. Bennett, 123 South Howard street; John Hiltz & Son, 3 Clay street; E. D. Preston, 140 West Fayette street, and A. J. Robinson Company, 30 West Franklin street, have been selected to estimate on the construction. Estimates to be in December 29.

Baltimore—Warehouse.—J. Charles Linthicum, 314 St. Paul street, as agent for Helen A. Linthicum, has awarded contract to Leonard F. Fowler, builder, 602 West Saratoga street, for the construction of warehouse to be located at 206 Water street after plans and specifications by Herbert G. Crisp, architect, 409 Calvert Building, St. Paul and Fayette streets. Structure to be two stories high, 24.4x89 feet; brick with granite base and stone trimmings; concrete foundation; steel beams; slag roofing; vault lights; metal frames and sashes glazed with wireglass. Plumbing, electric wiring, heating system and elevator not included in contract. Cost to be about $6000.

Baltimore — Restaurant.—Leonard H. Neudecker, president Southern Trust & Deposit Co., Gay and High streets, has awarded contract to L. O. Hildebrandt, builder, 2217 East Preston street, for the construction of restaurant to be located at 603 and 605 Water street. Structure to be two stories high, 25x40 feet; brick with stone trimmings; concrete foundation; steel beams; slag roofing; galvanized-iron cornice; gas fixtures; sanitary plumbing; cost to be about $5000.

Baltimore—Warehouse.—Thomas O'Neill of O'Neill & Co., Charles and Lexington streets, has awarded contract to John Stack & Sons, builders, 250 West Preston street, for the construction of warehouse to be located at Crooked lane and Wyoming street. Structure to be four stories high with basement, 42x57 feet; brick with stone trimmings; concrete foundation; steel beams; cast-iron columns; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; elevator.

Baltimore—Restaurant.—Bruno Momenthy, 425 East Lexington street, has commissioned Henry J. Tinley, architect, 421 St. Paul street, to prepare plans and specifications for restaurant to be located at northeast corner Postoffice avenue and Water street. Structure to be three stories high with basement, 30x100 feet; brick with stone trimmings; concrete foundation; steel beams; tin or slag roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system. This building previously mentioned.

Baltimore — Apartment-house. — Revised plans and specifications have been made by Wyatt & Nolting, architects, Builders' Exchange Building, 2 East Lexington street, for apartment-house for the Walter R. Abell estate, Charles J. Bonaparte, trustee, 216 St. Paul street, to be erected at northwest corner of Charles street and Lafayette avenue. Structure to be eight stories high with basement, 60x150 feet; brick with granite base and Indiana limestone and terra-cotta trimmings; concrete foundation; steel-frame fireproof construction; reinforced concrete floors; slag roofing; marble or tile floors; cast-iron stairway; galvanized-iron cornice and skylight; interior marble work. Heating, electrical work, elevator, dumbwaiter, plumbing, lighting fixtures, kitchen equipment, papering and decorating not included in contract. An alternate bid will be made on reinforced concrete construction for the building instead of steel. James Stewart & Co., 319 North Charles street; Henry Smith & Sons Co., 116 South Regester street; John Cowan, 106 West Madison street, and Charles Gilpin, 601 Union Trust Building, Charles and Fayette streets, have been selected to estimate on the revision. Estimates to be in January 3. This building previously mentioned.

Baltimore—Store Building.—Wm. Kabernagle, 102 Water street, has awarded contract to Edward Seickmann, builder, 1808 North Chester street, for the construction of store building to be located at 102 Water street. Structure to be four stories high, 20x40 feet; brick with granite base and stone trimmings; concrete foundation; steel beams; tin roofing; galvanized-iron cornice; metal ceilings; gas fixtures; sanitary plumbing; steam-heating system; cost to be about $5000.

Baltimore—Bank Building.—Further details have been obtained concerning bank building for the Farmers and Merchants' Bank, 301 North Charles street, to be erected at northwest corner of South and Lombard streets, after plans and specifications by Baldwin & Pennington, architects, 311 North Charles street. Structure to be one story high, 53x82 feet; red brick with granite base and Indiana limestone trimmings; concrete foundation; fireproof construction throughout; bronze frames and sashes glazed with wireglass; ornamental iron grille work; interior marble work; fireproof vaults; electric wiring and fixtures; sanitary plumbing; steam-heating system. Plans will shortly be distributed to builders for estimates on construction.

Baltimore—Office Building.—It is reported that a 14-story office building will be erected at 217 West German street and 208, 210, 212, 214 and 216 Water street. This property, as previously mentioned in this column, was purchased by Albert Gorter, 329 North Charles street.

Baltimore—Store Building.—John J. Hurst and Charles W. Hurst, 643 Calvert Building, St. Paul and Fayette streets, have purchased the property located at 52 and 54 Centre Market Space, and will erect a four-story store building on the site, which is 25x65 feet.

Baltimore—Office Building.—John J. Hurst and Charles W. Hurst, 643 Calvert Building, St. Paul and Fayette streets, are arranging for the erection of a three-story office building at northwest corner of Lombard and Hanover streets, on site which is 29x39 feet. They have not as yet selected an architect to prepare the plans and specifications for the building. This building previously mentioned.

Baltimore—Dwellings.—The Lansdown Improvement Co., John J. Hurst and Charles W. Hurst, 643 Calvert Building, St. Paul and Fayette streets, has purchased about 200 lots at Ruxton Heights. Each of the lots are 50x150 feet, and will be improved with dwellinghouses.

Baltimore — Apartment-house. — John J. Hurst and Charles W. Hurst, 643 Calvert Building, St. Paul and Fayette streets, have purchased the property located at 1823 and 1825 Maryland avenue, and will convert the buildings into an apartment-house. The structures are three stories high, 36x100 feet.

Baltimore—Store Building.—Mrs. Laura V. Bowie, 811 North Eutaw street, and Charles G. Carmine, 1101 McCulloh street, are contemplating the erection of store building to be located at southwest corner of Howard and Franklin streets, after plans and specifications by Martin C. Miller, architect, Mutual Life Building, Buffalo, N. Y. Structure to be five stories high with basement, 36x120 feet; brick with stone base and terra-cotta trimmings; concrete foundation; steel beams; cast-iron columns; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevators. James Stewart & Co., 319 North Charles street; Henry Smith & Sons Co., 116 South Regester street; A. J. Robinson Co., 30 West Franklin street; J. H. Miller, 110 Dover street, and Milton C. Davis, 140 West Fayette street, have been selected to estimate on the construction. Estimates to be in December 24.

Baltimore—Hotel.—Charles Gilpin, builder,

601 Union Trust Building, Charles and Fayette streets, invites subbids on the steel and iron work for hotel for the Caswell Hotel Co., to be erected at northeast corner of Baltimore and Hanover streets, after plans and specifications by Mulliken & Moeller, architects, 7 West 38th street, New York. Structure to be seven stories high, 68.8x150 feet. Bids to be in December 28. This building previously mentioned.

Manufacturing Buildings and Other Enterprises.

Baltimore—Mineral-water Company.—Three D. D. D. Mineral Water Co. has been incorporated with an authorized capital stock of $6000 by Littleton M. Sturgis, Greene and Mulberry streets; Paul Cobb, Oscar C. Orem, John T. Murphy and O. Parker Baker.

Baltimore—Electric-light and Power Plant. Some weeks ago details were presented in this column regarding the $1,000,000 electric-lighting and power plant which the Maryland Telephone Co. is to build. It is of further interest to note that the contracts for all the machinery have been awarded as follows: To the Stirling Company of Chicago, Ill., for water-tube boilers; Westinghouse Machine Co. of Pittsburg, Pa., Roney mechanical stokers and turbine generators; Mead-Morrison Company of New York, the coal hoist, coal crushers and cable railway; Custodis Chimney Construction Co. of New York, radial brick stacks and foundations; Alberger Condenser Co. of New York, the surface condensers; American Bridge Co. of New York, the structural steel; Niles-Bement-Pond Co. of Philadelphia, Pa., the electric traveling crane; Westinghouse Electric & Manufacturing Co. of Pittsburg, Pa., the electrical equipment; Standard Underground Cable Co. of Pittsburg, Pa., the cables. The Filbert Paving & Construction Co. of 1210 Block street, Baltimore, has contract for the foundation work; D. M. Larkin, 1463 Columbia avenue, Baltimore, contract for grading and excavating, and, as previously stated, John Waters of 23 East Centre street, Baltimore, has contract for erecting the buildings. The work is now in progress. James B. Scott, consulting engineer, 13 East Read street, Baltimore, is the engineer in charge of the entire work. David E. Evans is president of the Maryland Company; offices in Maryland Telephone Building, Lexington and Courtland streets.

Baltimore—Gas Plant.—The Consolidated Gas Co., 206 West Lexington street, has awarded contract to H. H. Brown, builder, 109 Clay street, for the general repair of three buildings located at its plant on Severn street, between Bayard and Bush streets. Structures are 60x100 feet, 55x75 feet and 53x53 feet. Repairs consist mainly of new floors, galvanized-iron and slate roofing and window frames and sashes.

Baltimore—Jewelry Company.—The John W. Mealy & Sons Co. has been incorporated, with an authorized capital stock of $50,000, for dealing in and manufacturing gold and silver ware, jewelry, clocks, etc., by John W. Mealy, 7 West Lexington street; Alfred E. Booth, Peter E. Tome, Robert H. Smith and Omer F. Hershey.

Baltimore — Oiled-clothing Factory. — The Maryland Oiled Clothing Co., 402 and 404 South Chester street, recently reported in this column as having been incorporated to manufacture oiled clothing, has purchased the property located at 2411 and 2413 Eastern avenue. The property is improved with a three-story building 60x140 feet, which will be altered to suit its purposes. Two heating-rooms equipped with steam pipes will be installed.

Baltimore—Carriage Factory.—Frank W. Sandruck, carriage manufacturer, Howard and Tyson streets, has awarded contract to the Russell Construction Co., builder, 17 East Saratoga street, for the construction of carriage factory to be located at corner of Howard and Tyson streets, after plans and specifications by Henry J. Tinley, architect, 421 St. Paul street. Structure to be four stories high, 27x75 feet; brick with stone trimmings; concrete foundation; steel beams; slag roofing; galvanized-iron cornice; sanitary plumbing. This building previously mentioned.

Subbids Wanted.

Mention of contractors wanting subbids on construction work and material will be found, when published, in the "Machinery Wanted" column on another page under the heading of "Building Equipment and Supplies."

ALABAMA.

Anniston — Manufacturing.— Adair Manufacturing Co. has been incorporated, with $12,000 capital.

Anniston—Knitting Mill.—The Anniston Knitting Mills will build a two-story addition 70x120 feet.

Anniston — Incubator Factory. — Reports state that Will Darden and associates contemplate the establishment of plant to manufacture an incubator recently invented.

Anniston—Building and Paving Stone.—W. W. McAfee has secured site on which to erect plant for the manufacture of sand and cement building and paving stone.

Birmingham — Cooperage Plant.—Kennedy Stave & Cooperage Co. has increased capital from $50,000 to $100,000, and has under consideration the increasing of the capacity of cooperage plant, especially the output of kegs.*

Birmingham—Coal Mines and Coke Ovens. It is reported that Drennen & Co. have purchased the property of the Palos Coal & Coke Co. at $150,000. Later the company will build coke ovens. The present output of the mines is 400 tons a day.

Birmingham — Shoe Company. — Incorporated: Bullock-McGuire Company, with $10,000 capital, by George H. Bowers, M. H. Warren, E. W. Bullock, W. H. Wallace and Charles P. McGuire.

Birmingham — Mineral and Timber-land Development.—Chartered: Alabama Land & Development Co., with $1,000,000 capital, and R. E. Lockett of Birmingham, president; R. G. Isbell of Tupelo, Miss., vice-president and treasurer, and F. E. Littlefield of Birmingham, secretary. The company will begin at once the development of 100,000 acres of timber and mineral land in Winston county which it controls.

Birmingham—Stove Works.—Thomas Ellis, Perkins Ellis and Frank Ellis have purchased and will operate the plant of the Avondale Stove & Foundry Co. The present daily output of 200 stoves will be increased.

Carrollton—Felloe Factory.—International Felloe Manufacturing Co. has been incorporated by Samuel L. Cox, F. D. Green and T. H. Lever, to manufacture wagon felloes; capital $50,000.

Centreville—Knitting Mill.—The Centreville Warehouse Co. is now investigating relative to the establishment of the knitting mill mentioned last week. No decision has been made as to details, and correspondence regarding same has been invited.*

Ensley—Candy Factory.—It is reported that Tony Frank has secured building and is installing machinery for the manufacture of candies.

Gadsden—Knitting Mill.—The Adams Knitting Mill, recently reported established with 10 machines, etc., has awarded contract for more machinery to double its capacity.

Geneva—Lumber Mill.—Reports state that the Gulf Yellow-Pine Lumber Co. has purchased 15,000 acres of timber land and is erecting mill. Thomas Palmer is vice-president and general manager.

Mobile—Stave Factory and Finishing Plant. Kennedy Stave & Cooperage Co. of Birmingham, Ala., will shortly erect stave-manufacturing and finishing plant. J. B. Kennedy will be in charge.*

Montgomery—Development Company.—Capital Heights Development Co. has been incorporated, with $100,000 capital; J. S. Pinckard, president; Massey Wilson, vice-president, and Albert F. Wilson, secretary.

Montgomery — Shoe Company.—Varnedoe-Briel-Moncrieffe Shoe Co. has been incorporated, with $10,500 capital, by S. C. Varnedoe, Emmet Moncrieffe, Mary E. Briel and others.

Pell City—Cotton Mill.—The Pell City Manufacturing Co. has installed 40 looms additional and awarded contract for 60 more, making a total of 772 looms.

Troy—Road Improvements.—Pike county contemplates issuing $150,000 of bonds for improving roads. Address A. C. Edmonson, judge of probate.

ARKANSAS.

Altheimer — Realty Company.—Sunnybrook Realty Co. has been incorporated with $25,000 capital by Louis Rosenfield, Joseph Altheimer and Ben J. Altheimer.

Cushman—Mercantile.—Denison-Shell Mercantile Co. has been incorporated, with $10,000 capital. Walter H. Denison is president.

Jonesboro — Electric-power Plant.—J. F. Gautney contemplates building an electric plant to transmit electricity to a distance of 100 miles for use in lighting, for railways and for other purposes. Detailed information regarding the practicabilities of long-distance transmission lines and other particulars are wanted. Engineers are invited to correspond.*

Little Rock—Electric-light Plant.—Retail Grocers' Ice Co. contemplates installing electric-light plant.

Little Rock—Sand Company.—A sand company is being organized and Mord Roberts, Baring Cross, Ark., is promoting the enterprise.

Magazine.—Chartered: Cummings Bros. & Co., with $10,000 capital. J. R. Cummings is president; Elmo Cummings, vice-president, and R. B. Robinson, secretary-treasurer.

Paragould—Cider and Vinegar Factory.—Paragould Cider & Vinegar Co. has incorporated, with $10,000 capital, to manufacture cider and vinegar; incorporators, H. W. Woosley, M. B. Wood, F. C. Mack, R. L. Carpenter and others.

Pine Bluff—Sewerage System.—Herman C. Gass of Bellwood, Ill., has contract at $14,394.81 for the construction of about five miles of sewer, previously reported.

Pocahontas — Woodworking Plant.—Pocahontas Hoop & Stave Co. has incorporated, with $10,000 capital, to erect and operate a woodworking plant, manufacture hoops, staves, etc.; incorporators, George R. Sullinger, T. M. Speice, J. F. Speice and Wilbert Mathile.

Prairie View. — Incorporated: Wilder-Blair Company, with $25,000 capital. A. D. Wilder is president; W. R. Blair, vice-president, and A. L. Gray, secretary-treasurer.

Siloam Springs — Electric-light Plant. — Siloam Springs Railroad, Power & Light Co., recently incorporated with D. Zimmerman, president, will, besides building a railroad, erect electric plant for furnishing light and power; capital $500,000.

Van Buren—Oil and Gas Wells, Coal Mines, etc.—Lees Creek Gas, Coal & Oil Co. is the name of company reported last week as being organized with R. J. Tallman, president; J. L. Rea, vice-president, and George R. Wood, secretary-treasurer; capital $250,000.

FLORIDA.

Chipley—Real Estate.—E. N. Dekle, A. D. Campbell, S. A. Alford, S. J. Gay and others have incorporated the Dekle Land Co., with $100,000 capital.

Jacksonville—Automobile Company.—East Coast Automobile Co. has been incorporated, with $10,000 capital, by P. L. Sutherland, Guy R. Champlain, E. A. Groover, A. D. Covington and A. S. Hubbard.

Lafayette County—Saw-mills, Naval Stores, etc.—A Michigan syndicate, owning 80,000 acres of land in Lafayette county, is having surveys made by A. W. Taylor of Gainesville, Fla., and will erect saw-mills and conduct naval stores.

Lake City—Mercantile.—Adams Supply Co. has been incorporated with $100,000 capital. Frank Adams of Jasper, Fla., is president, and A. J. Moseley of Lake City, Fla., secretary and general manager.

Live Oak — Mercantile.—Worth Stephens and associates have incorporated the Worth-Stephens Company, with $60,000 capital.

Tampa—Cigar Factory.—Juan Cabanazon Cigar Co. has been incorporated, with $5000 capital, by Kenneth I. McKay, Edward Lynch and Henry L. Meyers, to manufacture cigars, etc.

GEORGIA.

Atlanta—Cotton-twine Mill.—Atlanta capitalists propose establishing a mill for the manufacture of cotton twine from yarn and cloth-mill waste, about $50,000 to be the initial investment. No machinery has been purchased as yet. The American Commission Co., 121 Whitehall street, can give information.*

Atlanta — Saw and Planing Mills, etc.—Chartered: North Georgia Lumber Co., with $150,000 capital, by Marion M. Jackson, A. J. Orme of Atlanta, Horace A. Fields of Knoxville, Tenn., and J. A. Drake of Corning, N. Y., to erect saw and planing mills, deal in timber land, etc.

Atlanta — Mercantile. — George Law and Robert Collier have incorporated as Collier & Law, with $12,000 capital.

Atlanta—Coal Mines.—Chartered: Montevallo Dogwood Coal Co., with $10,000 capital, by L. C. Simmons, E. H. Anderson, F. S. Davenport and S. B. Turman, to mine coal.

Atlanta—Reinforced Concrete Company.—Southern States Reinforced Concrete Co. has been incorporated, with $1000 capital, by Geo. B. Hinman, A. Francis Walker and John H. Mullin.

Canton—Marble-finishing Works.—Georgia Marble-Finishing Works, which has recently reorganized with T. M. Brady, president and general manager; Harold J. Brady, secretary-treasurer, and E. A. McCandless, superintendent, will erect 60-foot addition.

Columbus—Planing Mill.—W. T. Harvey Lumber Co. has been incorporated with $30,000 capital and privilege of increasing to $100,000 by W. T. Harvey, W. H. Harvey and E. L. Harvey to succeed W. T. Harvey & Co.

Cordele—Grist Mill.—H. L. Finger has contract to erect mill building, 100x40 feet, for P. C. Clegg, previously reported. Plant will have a daily capacity of from 600 to 750 bushels of meal a day. About $7500 will be invested.*

Douglas—Electric-light Plant and Water-works.—City is giving some consideration to the construction of electric-light plant and water-works for which $20,000 in bonds were previously reported voted. Address The Mayor.

Fairburn — Knitting Mill.—The Fairburn Hosiery Mills has been incorporated by L. S., H. L. and B. S. Roan.

Macon—Crate Factory.—Manufacturers will establish crate factory, and are erecting machinery building 100x150 feet. Frank W. Hazlehurst, secretary Georgia Fruit-Growers' Association, can probably give information.

Macon — Fertilizer Factory. — Chartered: The Jones & Roberts Fertilizer Co., with $5000 capital, by Baxter Jones and J. D. Roberts.

Macon — Sanitary Milk Plant. — Reports state that John S. Hoge, Henry Lamar and E. W. Gould contemplate organizing a stock company for the establishment of a sanitary milk plant.

Milltown—Turpentine Distillery.—Clements, Lee & Co. are erecting turpentine distillery.

Savannah—Steamship Company.— Chartered: Gibson Line of Steamers, by W. T. Gibson, Walter F. Gibson, John F. Paulsen and associates, with $25,000 capital, to operate steamers between Savannah and Augusta.

Savannah—Crab Cannery.—It is reported that S. L. Addison, manager of McMenamin & Co., Hampton, Va., is investigating site for the removal of crab cannery to Savannah.

Savannah — Electric-light Plant.—City has under consideration the erection of electric-light plant. Address The Mayor.

Vidalia — Water-works and Electric-light Plant.—Chartered: Vidalia Water & Electric Light Co., to construct water-works and electric-light plant.

Waycross—Saw-mill and Turpentine Plant. Reports state that W. T. Brinson has purchased 5000 acres of pine land in Ware county, and will erect saw-mill and turpentine plant.

KENTUCKY.

Bedford—Grist Mill.—J. W. Jackson, it is reported, will add a grist mill to saw-mill.

Chicago—Distillery.—W. W. Dant of Lebanon, Ky., and associates have incorporated the Smith Distillery Co. with $16,000 capital.

Lexington.—Incorporated: The John H. Morgan Co., with $400,000 capital, by Joseph S. Botts, Charles Kerr, John H. Morgan and others.

Louisville—Organ Factory.—Beckwith Organ Co. has been incorporated with $250,000 capital to establish organ factory by Cyrus L. Adler, R. S. Hill and William T. Hale. Mr. Adler was previously reported as contemplating establishment of factory.

Louisville—Revolving Ink Well.—Revolving Ink Well Co., reported incorporated last week with $10,000 capital, has completed organization with S. G. Reynolds, president; J. T. O'Neal, vice-president, and R. M. Hartwell, secretary-treasurer, for the manufacture of a revolving ink well invented by Mr. Reynolds.

Louisville — Engraving Company. — E. B. Tinsley, Charles L. Caron, Fred S. Mayer and Bruce Haldeman have incorporated the Tinsley-Mayer Engraving Co. with $20,000 capital.

Madisonville—Real Estate.—Home Improvement Co. has been incorporated with $10,000 capital by C. C. Givens, C. H. Murphy and others.

Newport—Grain Elevator.—It is reported that the Newport Milling Co. has purchased site on which to erect elevator.

Paintsville—Coal Mines.—Curegon Coal Co. has incorporated, with $50,000 capital, to mine, ship and sell coal; incorporators, John C. Mayo of Paintsville, E. S. Hitchins of Olive Hill, Ky.; L. N. Davis, S. S. Willis of Ashland, Ky., and Adam E. Hitchins of Frostburg, Md.

Pikeville—Realty Company.—R. A. Hellier, J. S. Cline and Robert L. Miller have incorporated the Hellier-Cline Realty Co. with $2000 capital.

Princeton—Water-works.—City has engaged Granbery Jackson, C. E., Nashville, Tenn., to make surveys and prepare plans for water-works system, for which $35,000 of bonds was previously reported voted. Bids for construction will be asked about February 1.

LOUISIANA.

Bunkie—Water-works.—Town has appointed W. G. Branch, W. D. Haas and W. P. Bridenthal a committee to make investigations relative to the construction of water-works.

Florien—Saw-mill.—It is reported that the N. A. Ayres Lumber Co. will erect saw-mill with a capacity of 40,000 feet.

Hornbeck — Saw-mill. — Reports state that W. P. Everett has leased saw-mill from D. B. Pate, which will be improved and operated, increasing the capacity to 40,000 feet a day.

Marksville—Water-works and Electric-light Plant.—Town will vote December 26 to consider the installing of water-works and purchasing local electric-light plant. Address Town Clerk.

New Orleans—Carbonic-acid Gas.—Reports state that the Liquid Carbonic Co. of Chicago, Ill., contemplates establishing plant for the manufacture of carbonic-acid gas; about $50,000 will be invested; F. P. Goebel, local representative.

New Orleans—Tannery.—Chartered: Louisiana Tanning Co., with A. B. Wheeler, president; E. Larroux, vice-president; E. G. Steinke, secretary and treasurer, and C. M. Walter, manager. Work on the erection of plant will begin at once. Messrs. Steinke & Walter were previously reported as organizing $200,000 company for the establishment of tannery.

New Orleans — Steam Laundry. — Swiss Steam Laundry Co. will erect two-story brick building at 1010 Gravier and 315 Dryades street to replace building recently reported burned. Bids for the construction are being received by R. A. Fox, 935 Gravier street.

New Orleans—Canning Factory.—It is reported that B. H. Farren, president of B. H. Farren & Co., foot of Wolfe street, Baltimore, Md., is investigating with a view of establishing oyster-packing house at New Orleans. If plant is established it will have a daily capacity of from 500 to 3000 barrels of oysters and represent an investment of $100,000.

Shreveport—Fertilizer Works.—Report mentioned last month that George C. Vernard, representing Armour & Co., Chicago, Ill., was investigating site for the establishment of fertilizer works was incorrect.

MARYLAND.

Cumberland—Car-wheel Works.—John Duroth, Conrad G. Smith, John T. Edwards, Conrad Housroth and James W. Thomas have incorporated the Maryland Car-Wheel Manufacturing Co., with $25,000 capital, to manufacture a self-lubricating car-wheel invented by Mr. Duroth; also various kinds of cars and mining supplies.

Elkton—Pattern Shop, etc.—It is reported that the James T. Powers Foundry Co. will enlarge plant and erect pattern shop.

Havre de Grace—Sewerage System.—F. E. Schneider & Co., 203½ St. Paul street, Baltimore, Md., have contract at $17,969.40 for the construction of sewerage system previously reported.

Hoffmanville — Dynamite Plant.—Rockdale Powder Co. will rebuild that portion of dynamite plant destroyed by explosion (reported last week) under the supervision of its own superintendent; general office, York, Pa.

MISSISSIPPI.

Canton—Sewerage System.—City has voted against the $50,000 bond issue previously reported for the construction of sewerage system. Address The Mayor.

Ellisville — Publishing.—Incorporated: Ellisville Publishing Co., with $2500 capital, by C. S. Myers, A. B. Jordan and others.

Greenville—Lumber Company.—H. N. Alexander, J. F. Barnes and T. P. Reynolds have incorporated the Alexander Lumber Co. with $50,000 capital.

Hattiesburg — Ice Plant. — People's Ice & Coal Co. has increased capital to $50,000 and will also increase the capacity of plant from 20 to 50 tons.*

Hattiesburg—Brick Works.—The Riverside Brick & Manufacturing Co. has been incorporated with $10,000 capital.

Hattiesburg — Gas Plant. — Reports state that H. L. McKee of Meridian, Miss., is investigating site with a view to establishing gas plant.

Lexington. — Incorporated: Barbour, Herbert & Rogers Co., with $25,000 capital, by T. L. Barbour, W. B. Herbert and J. H. Rogers.

Meridian—Gas, Electric-light and Steam Heat.—C. H. Dabbs, E. Cahn, B. J. Carter, T. E. Rivers, H. L. McKee and associates have applied for franchise to establish plant for furnishing gas, electric lights and steam heat.

Norfield—Brick Works.—Incorporated: The Norfield Brick Co., with $30,000 capital.

Scooba — Canning Factory.—A stock company is being organized, with $2000 capital, to establish canning factory, and J. W. Carter is promoting the enterprise.

Silver City (P. O. Palmetto Home)—Cottonseed-oil Mill.—It is reported that Dr. R. V. Powers contemplates erecting cotton-seed-oil mill.

West Point — Tobacco Company.—Walter Weaver Tobacco Co. has been incorporated, with $15,000 capital.

MISSOURI.

Clayton—Mercantile.—Edward J. Oncken Mercantile Co. has been incorporated, with $12,000 capital, by Edward J. Oncken and others.

Joplin—Mining.—K & B Mining Co. has been incorporated, with $50,000 capital, by B. A. Koopple, B. V. Boomerstein, George Boomerstein and others.

Joplin—Mining.—E. H. Mower, Noble Hurd and A. W. Brown have incorporated the Clover Leaf Mining Co., with $35,000 capital.

Kansas City—Real Estate.—J. S. Lillis, W. H. Lucas and Henry Koehler have incorporated the Belmon Land Co., with $50,000 capital.

Kansas City—Oil and Gas Wells.—Incorporated: Williams Oil & Gas Co., by W. A. Williams, Charles E. Williams and W. E. Michaels, to drill for oil and gas.

Kansas City—Lumber Company.—Stanley D. Freeman, T. F. Beckman, G. H. Lawrey and others have incorporated the Freeman Lumber Co., with $25,000 capital.

Kansas City — Construction Company. — T. H. Ludlow, W. B. Scruggs and James T. Burney have incorporated the Santa Fe Construction Co. with $15,000 capital.

Kansas City — Ornamental Iron Works. — Frank Tilk, A. W. Childs, T. G. Schweiger and others have incorporated the Frank Tilk Ornamental Iron Works Co. with $6000 capital.

Neck—Lead and Zinc Mines.—Incorporated: North Fork Lead & Zinc Co., with $50,000 capital, by F. M. Evans, Jesse Roberts and John J. O'Brien. Mr. Roberts is vice-president and general manager.*

New Madrid—Water-works.—Owen Ford, 710 Security Building, St. Louis, Mo., is preparing plans and specifications for city's proposed water-works, and contract for the construction will shortly be asked; W. H. Copeland, city clerk.

Springfield—Drug Company.—Ozark Medicine Co. has been incorporated, with $100,000 capital, by S. A. Hazleton, Thomas R. Gibson, B. E. Meyer and others.

St. Louis — Cloth Company. — The Direct Cloth Co. has been incorporated with $7000 capital by J. Henry Biermann, Harry G. Ambrose and others.

St. Louis — Manufacturing. — The Marsh Manufacturing Co. has incorporated with $100,000 capital to manufacture a patented device known as "Three and Four Horse Evener;" incorporators, William F. Hilles, Harry A. Peter and Maurice C. Bederman; office 504 Granite Building.

St. Louis—Granulator.—Frank A. Ruf, Edwin Saylor and A. H. Ruf have incorporated the Duplex Granulator Co. to manufacture machinery.

St. Louis—Automobile Company.—St. Louis Car Co. has secured building at 5300 North 2d street, which will be remodeled and equipped for the manufacture of automobiles. Company will also increase capital stock from $2,500,000 to $3,000,000.

St. Louis—Electric Company.—Southwestern Electric Co. has been incorporated with $1500 capital by James C. Knight, Dudley J. Pine, David W. Stinson and Willard C. Knight.

St. Louis—Realty Company.—Incorporated: Hoelke Realty Co., with $16,000 capital, by Ernest Hoelke, Roca Hoelke, Elsa Wippern and Lyda Stone.

St. Louis—Mining.—Constellation Mining Co. has been incorporated, with $150,000 capital, by George Mekeel, Andrew C. Ketring, Otto Weibert and J. Carter Carstens.

St. Louis — Advertising Machinery. — St. Louis Automatic Advertising Co. has incorporated, with $6000 capital, to deal in advertising machinery, appliances, etc.; incorporators, Sprague F. Haskell, Emil Stegner, Robert C. Reilly, Fred H. Fricke and William F. Ittner.

St. Louis—Medical Company.—J. L. Miller, L. C. Bitting and Julius B. Paris have incorporated the State Medical Co., with $5000 capital.

Webb City—Lead and Zinc Mines.—Corrie Cole Mining Co., and not the Carrie Cole Manufacturing Co., is the correct title of company previously reported as having been incorporated, with $48,000 captal, by Harry Tamblin and associates.*

NORTH CAROLINA.

Abbottsburg — Colony Company.—Carolina Truckers' Colony has completed organization with Z. W. Whitehead of Wilmington, N. C., president; John Wilder Atkinson of Wilmington, N. C., vice-president; W. J. Gibson, secretary-treasurer, and W. E. Humphrey, general manager (both of Goldsboro, N. C.) The company will divide into farms 6000 acres of land near Abbottsburg; capital $25,000; principal office Wilmington, N. C.

Charlotte — Fertilizer-mixing Plant. — Reports state that the North Carolina Cotton Oil Co. will install fertilizer-mixing plant.

Charlotte — Handkerchief Factory. — The Charlotte Handkerchief Manufacturing Co. has been organized by J. B. Caudle of Rockingham, N. C., and will establish factory at once. Building has been secured and machinery has been purchased. Twelve machines for making hemstitched goods will be installed.

Charlotte — Mattress Factory. — Southern Cotton Oil Co. will establish mattress factory having a daily capacity of 200. All machinery has been purchased.

Edenton—Cotton Mill.—The Edenton Cotton Mills has erected addition 80x98 feet and installed 3360 spindles; 3750 more spindles will be added next year.

Lillington — Publishing. — Harnett News Publishing Co. has been incorporated with an authorized capital of $2000 by J. F. McKay, R. E. Taylor, W. A. Stewart, H. L. Godwin and associates for the publication of weekly newspaper.

Newbern — Ice-plant Improvements.—Newbern Ice Co. is building addition, and the daily capacity will be increased from 25 to 37 tons.

Sanford—Furniture Factory.—It is reported that H. M. Weller of Montgomery, Pa., has purchased and will operate the plant of the Sanford Furniture Manufacturing Co.

Spray—Cotton Mill.—The Lily Mills contemplates adding cotton-spinning spindles; present equipment, 2486 ring spindles and 318 looms.

Statesville—Gold Mines.—Reports state that J. E. Gray, R. E. Armfield and associates have engaged mining engineers to test the Gray gold mines with a view to installing modern machinery for developing.

Walnut Cove—Coal-mining.—Southern Anthracite Coal & Mineral Co. is arranging for the development of a large vein of anthracite coal near Walnut Cove, and D. M. Evans is engineer in charge.

Waxhaw—Gold-mining.—The Colossus Gold Mining Co. is completing arrangements for the extensive development of gold mines near Waxhaw; a crushing mill employing the cyanide process and equipment for handling 500 tons of ore daily are being installed. This company was reported incorporated last June with $1,000,000 capital.

Wilmington—Sash, Door and Blind Factory.—Eagle Manufacturing Co. has been organized with J. A. Lewis, president; James Milian, secretary; J. O. Powers, treasurer, and G. F. Quinn, general manager. The company has purchased site on which to erect building, which will be equipped for the manufacture of sash, doors, blinds, etc.; capital $5000.

Wilson—Real Estate.—R. J. Grantham, G. T. Stronarch, S. H. Anderson and others have incorporated the Grantham Real Estate Agency, with $10,000 capital.

Wilson—Vehicle Works, etc.—Wilson Auto-Transit Co. has been incorporated, with an authorized capital of $100,000, by W. B. Young, J. C. Hales, B. W. Kincaid, Hattie B. Young, C. F. Botts, R. E. Massey and S. H. Finch, to manufacture vehicles, establish automobile lines, etc.

Winston-Salem—Mercantile.—W. H. Marler, R. E. Dalton, John L. Gilmer and others have incorporated the Marler-Dalton-Gilmer Company, with $250,000 capital.

SOUTH CAROLINA.

Charleston — Chemical Works.—Charleston Chemical Co. has been organized with T. W. Passailaigue, president; L. Y. Dawson, vice-president; W. W. Fuller, secretary-treasurer, and C. J. Staake, manager; office 36 King street.

Cheraw — Hardware Company. — William McBryde, J. B. Merriman, J. D. Parker and J. Fletcher McBryde have incorporated the Planters' Hardware Co. with $5000 capital.

Clinton—Cotton Mill.—Lydia Cotton Mills will during the coming year add 8000 spindles and 200 looms, giving a total of 20,000 spindles and 500 looms.

Conway—Grocery.—H. H. Woodward, B. F. Tuton and J. A. Lewis have incorporated the Conway Wholesale Grocery Co., with $5000 capital.

Conway — Live-stock Company. — Conway Live-Stock Co., reported incorporated last week with $15,000 capital, has the following officers: Austin C. Thompson, president; A. Thurman Collins, vice-president, and John S. Buck, secretary-treasurer.

Hamer—Cottonseed-oil Mill.— Independent Cotton Oil Co. of Darlington, S. C., is erecting 40-ton cottonseed-oil mill.

Kingstree—Real Estate.—Kingstree Real Estate Co. has been incorporated, with $10,000 capital, by J. F. Cooper, D. C. Scott, M. F. Hellu and John A. Kelley.

Marion—Cotton Mill.—The Marion Manufacturing Co., reported organized in October with $100,000 capital, has decided to install 7000 spindles and manufacture yarns. Steam-power will be used.

Marion—Sewerage System.—City has voted affirmatively the $25,000 bond issue previously reported for the construction of sewerage system. Address The Mayor.

Orangeburg. — Incorporated: Green-Brabham Company, with $1000 capital, by James M. Green and others.

Society Hill—Lumber Mill.—W. L. Clements Lumber Co. contemplates doubling the capacity of its plant.

Sumter — Undertakers' Supplies. — Witherspoon Bros. have increased capital from $40,000 to $50,000.

Sumter—Railway and Mill Supplies.—Chartered: Sumter Railway & Mill Supply Co., with $10,000 capital, by R. F. Haynesworth, Wm. Moran and J. L. Arnett.

Union—Furniture Company.—Thomas G. Bailey, Emslie Nicholson and others have incorporated the Bailey Furniture Co., with $20,000 capital.

Yorkville—Cotton Mill.—Thomas P. Moore, referred to last week as proposing to build a cotton mills, is of Morganton, N. C., where he can be addressed. Mr. Moore has made a proposition to form a $60,000 company and install an equipment of 3500 spindles for manufacturing low-grade cottons.

TENNESSEE.

Alamo—Mining Company.—Chartered: Alamo Mining Co., with an authorized capital of $18,000, by T. H. Durham, P. B. Nance, J. B. Fleming, R. L. McGee and associates.

Big Sandy—Canning Factory.—A company is being organized, with $7500 capital, to establish cannery with a daily capacity of 25,000 cans, and the Chicago Building & Manufacturing Co. of Chicago, Ill., is promoting the enterprise.

Bristol—Chair Factory.—Reports state that Theodore L. Frec of Cleveland, Ohio, and other capitalists have purchased the chair factory of the Ordway Manufacturing Co., and will improve and operate, increasing the output.

Bristol—Saw-mill.—J. P. Davis is erecting saw-mill 26x150 feet, with a daily capacity of 20,000 feet of lumber.

Chattanooga—Ice and Cold-storage Plant.—E. Woodruff of Atlanta, Ga., and associates, previously reported as to organize company to operate the plant of the Hamilton Ice & Cold Storage Co., recently purchased, and also to erect and operate 150-ton ice plant, have secured site and will at once begin the erection of ice factory at a cost of $75,000. About $30,000 will be expended on improvements to the Hamilton plant, and the present capacity of 25 tons will be doubled. Mr. Woodruff will be president of the company, and E. E. Egan, general manager (both of Atlanta, Ga.)

Chattanooga — Woodenware Factory.— Reports state that C. H. Frick of Chicago, Ill., will establish plant for the manufacture of small wooden utensils from by-products of woodworking plants.

Chattanooga — Shirt Factory. — Standard Manufacturing Co., Moritz Klinger, president, is installing machinery for the manufacture of shirts.

Chattanooga—Shoe Company.— Thompson-Neal Shoe Co. has increased capital from $7000 to $15,000.

Chattanooga—Talc Mines.—Chartered: Tennessee Talc Co., with $5000 capital, by C. F. Schofield, Paul J. Krausl, H. A. Symes, Jos. J. Johnson and Foster V. Brown.

Chattanooga — Publishing.—Fruit-Growers' Publishing Co. has been incorporated with $10,000 capital by R. S. Walker, William Cooke, R. B. Cooke, J. S. Walker and Wm. Shelton.

Clarksville—Gas Works.—Clarksville Gas Co. has been reorganized with J. H. Fall of Nashville, Tenn., president, and S. J. Lowe, secretary-treasurer and general manager. The company will make improvements to plant.

Columbia—Mill and Elevator.—It is stated that the City Grain & Feed Co. will rebuild mill and elevator reported burned last week at a loss of $41,000.

Cookeville — Water-works, Electric-light Plant and Street Improvements.—City has voted affirmatively the $25,000 bond issue, previously reported, for water-works, electric-light plant and street improvements. Address The Mayor.

Elkton—Cotton Gin.—M. L. and L. S. Patterson will rebuild next spring their cotton gin reported burned last week at a loss of $15,000.

Jackson — Fertilizer Factory. — Cloverine Fertilizer Co. of Mt. Pleasant, Tenn., composed of E. L. Gregory, Herman D. Ruhm and D. W. Shofner, will operate the fertilizer factory reported last week to be established at a cost of $10,000.

Knoxville—Clothing Factory.—Report mentioned last week that Claiborne, Tate & Cowan's factory was destroyed by fire was incorrect; the building was only slightly damaged.

Knoxville—Brick Works.—Alex. A. Scott Brick Co. has been incorporated, with $50,000 capital, and Alex. A. Scott, president and general manager; J. F. Scott, vice-president, and Alex. McMillan, secretary-treasurer, to establish brick plant with a daily capacity of 80,000 bricks on 62 acres of land recently purchased near Knoxville. Mr. Scott and associates were reported in September as to organize companies for the establishment of three brick-manufacturing plants, one to be located at Knoxville.

Knoxville. — Incorporated: Fulton Company, by M. W. Baldwin, Jr., J. Hermon and Joe E. Monter; capital $50,000.

Memphis — Tobacco Company. — Incorporated: Jordan, Gibson & Baum, with $50,000 capital, by Robert L. Jordan, Felix G. Gibson, David Baum, Simon Lehman and Sam Henderson.

Memphis—Real Estate.—Chartered: Interstate Realty Co., with $50,000 capital, by C. M. Collier, J. H. Phillips, C. I. Marsillot, W. R. Barksdale and C. W. Hunter.

Memphis — Drug Company. — Hamner-Ballard Drug Co. has been organized with R. M. Hamner, president; T. D. Ballard, vice-president and general manager, and F. W. Ward, secretary-treasurer, to succeed Hamner & Ballard; capital $30,000.

Mt. Pleasant—Flour Mill.—Geo. P. Webster & Co. are reported as to build 100-barrel flour mill.

Nashville — Chemical Works. — Nashville Chemical Co. has increased capital from $10,000 to $22,000.

Nashville—Fertilizers, etc.—Stoney Creek Sulphur Co. has been incorporated, with $10,000 capital, by Isaac T. Rhea, Edgar Jones, J. D. Plunkett, Thomas M. Hart and William D. Rhea, to deal in fertilizers, minerals, ores, etc.

Obion—Cooperage Plant.—L. A. Ward, A. Wilson, F. H. Foote, A. M. Albright and Frank Gassaway have incorporated the Obion Cooperage Co. with $6000 capital.

Paris—Medicine Company.—F. W. Cheek, W. D. Morris, H. L. Bruce, J. B. Thomason, F. F. Porter and W. H. Bower have incorporated the Porter Medicine Co. with $25,000 capital.

Pulaski—Flour and Meal Mill.—It is reported that J. M. Hunter will rebuild flour and meal mill recently burned. Plant will have a capacity of 125 barrels of flour and 200 bushels of meal.

Trenton — Mercantile. — Brock Supply Co. has been incorporated with an authorized capital of $25,000 by T. Brock and others.

TEXAS.

Athens—Mercantile.—J. W. Murchison and others have incorporated the Wofford-Murchison Company with $25,000 capital.

Beaumont—Grain Company.—Incorporated: Kirk-Miller-Josey Grain Co., with $20,000 capital, by Boone Kirk, J. E. Josey and R. C. Miller.

Beaumont — Cotton-batting and Wadding Mill.—The Martin Weiss Dry Goods Co. contemplates installing machinery to manufacture cotton batting and wadding from linters, for use in its dry goods store. Correspondence is invited.*

Clarksville—Ice Plant.—Local parties contemplate the erection of ice plant. A. B. Sanders of Shreveport, La., can probably give information.

Corsicana — Mercantile.—J. O. Shook and others have incorporated the Shook Company with $30,000 capital.

Corsicana—Oil Wells.—J. E. Whiteselle, J. L. Whiteselle, W. J. McKie and others have incorporated the Corsicana Company, with $50,000 capital, to drill for oil.

Dallas—Grain Company.—Felton Grain Co. has been incorporated with $10,000 capital by G. E. Felton and associates.

Humble — Electric-light Plant. — Humble Electric Co., previously reported incorporated with $30,000 capital, has secured franchise to construct and operate electric-light plant.

Jefferson—Water-works.—City has let contract to the McQuatters Plumbing & Machine Co., Hillsboro, Texas, for the construction of water-works previously reported.

Laredo — Irrigation Company. — Incorporated: Las Isilitas Irrigation Co., with $25,000 capital, to conduct a system of land irrigation; incorporators, R. Morton Johnson, John M. Beretta of Laredo, Ambrose Johnson of Jacksonville, Texas; Erik H. Green and J. Winthrop Campbell of Providence, R. I.

Llano—Mercantile.—B. A. Pessels and associates have incorporated the Pessels Dry Goods Co., with $20,000 capital.

Ray—Cotton Gin.—Incorporated: Ray Gin Co., with $7500 capital, by S. T. Robertson, J. H. Miller and W. J. Pigg.

San Antonio — Machine Shop. — Incorporated: Keyless Lock Co., with $250,000 capital, by Adolph Driess, Sr., O. Katzenberger, Otto Koehler, E. Heimendoren and R. L. Ball, to manufacture patent locks, machinery, etc.

Temple — Mercantile.—Incorporated: Matthews Bros., with $30,000 capital, by C. W. Matthews and associates.

Waco — Stationery-manufacturing. — Hill-Kleberg-Frost Company has incorporated, with $30,000 capital, to manufacture stationery and blank books; incorporators, B. H. Hill, J. W. Frost, E. Kellner and associates.

Waxahachie—Cotton Gin.—Robertson-Miller Gin Co. has been incorporated. with $20,000 capital, by J. Henry Miller, S. T. Robertson, W. J. Pigg and C. H. Pigg. Company has purchased, will enlarge and operate the plant of L. H. Peters.

Waxahachie—Cotton Gin.—J. H. Miller, S. T. Robertson and C. H. Pigg have incorporated the Miller-Robertson Gin Co. with $4000 capital.

Waxahachie—Mercantile.—S. Y. Matthews and associates have incorporated as Matthews Bros., with $30,000 capital.

Wills Point—Telephone System.—Farmers' Telephone Co. has been incorporated by John E. Owens, I. F. Callee and associates; capital $10,000.

VIRGINIA.

Alexandria—Real Estate.—Rock Creek Land Co. has been incorporated, with an authorized capital of $100,000, and R. L. Coleman of New York, president; Wm. B. Quinton of Washington, D. C., secretary-treasurer.

Basic City—Stove Foundry.—Virginia Stove & Manufacturing Co. is being incorporated with $30,000 capital, and R. E. Edmonds, president; Wm. A. Pratt, vice-president; A. L. Russell, general manager, and George McC. Craig, secretary-treasurer, to manufacture stoves. Messrs. Edmonds and Russell were reported last month as organizing company for this purpose.*

Buchanan—Broom Factory.—A plant for the manufacture of brooms will probably be established, and O. E. Obenshain can give information.*

Crozet—Corn and Feed Mill.—Reports state that a corn and feed mill will be erected, and C. J. Harden can give information.

Drake's Branch—Road Building.—Board of supervisors of Charlotte county have let contract to Adams & Alvis, Lynchburg, Va., for building five miles of macadam road.

Elliston—Saw-mill.—Riverside Lumber Co. has incorporated, with $5000 capital, to operate a saw-mill, deal in lumber, etc. W. J. Moses is president, and C. L. Hutton, secretary-treasurer.

Fries—Mercantile.—New River Grocery Co. has incorporated, with an authorized capital of $50,000; T. C. Vaughan of Spring Valley, Va., president; E. D. Vaughan of Winston-Salem, N. C., vice-president, and S. A. Dorsett of Spring Valley, Va., secretary. Three-story store building 40x120 feet is being erected.

Lynchburg—Realty Company.—Rivermont Realty Co. has been incorporated, with J. Gordon Payne, president; Henry M. Sackett, vice-president; J. C. Woodson, secretary, and C. H. Sackett, treasurer.

Martinsville — Electric-light Plant. — City has voted the $60,000 bond issue previously reported for an electric-light plant. Address The Mayor.

Newport News—Can Factory.—Peerless Can Manufacturing Co. has incorporated, with an authorized capital of $25,000, to manufacture and sell certain improvements in oil and gasoline cans, etc. A. F. Gaw, Jr., is president; J. J. Roberts, secretary, and J. E. B. Stuart, treasurer.

Norfolk—Real-estate Development.—Lafayette Annex Corporation has been organized with R. Henry Jones, president; W. W. Sale, vice-president; S. A. Woodward, secretary; G. Serpell, treasurer, and I. H. Payne, general manager, to develop as residence suburb 65 acres of land near Norfolk.

Portsmouth — Planing Mill.—Robinson & Salisbury will rebuild planing mill reported burned last week; structure to be 50x100 feet, and cost $10,000.*

Quinque—Flour Mill.—Reports state that R. N. Stephens contemplates the erection of flour mill with a capacity of from 25 to 40 barrels.

Richmond — Electric-light Plant.— Reports state that E. W. Trafford has been engaged to prepare plans and specifications for electric-light plant previously reported; W. H. Thompson, city electrician.

Richmond—Lumber Company.—Lithia Lumber Co. has been incorporated, with $10,000 capital. Ware B. Gay of Richmond is president, and R. G. Wood of Swansboro, Va., secretary-treasurer.

Richmond—Mercantile.—Incorporated: Geo. Hunter Company, with T. R. Hicks of Louisville, Ky., president; E. W. Mills of Fredericksburg, Va., vice-president, and S. A. Reinach of Richmond, secretary-treasurer; capital $10,000.

Roanoke — Improvement Company. — Roanoke Improvement Co. has been incorporated with an authorized capital of $25,000. H. H. Huggins is president; C. E. Mitchell, vice-president, and C. M. Armes, secretary-treasurer.

Roanoke—Printing Plant.—Stone Printing & Manufacturing Co. has purchased site on which to erect two-story brick and stone building, 150x100 feet, which will be equipped for doubling the present capacity.

Roanoke — Coal Mines.—Southern Anthracite Coal Co. has been incorporated with C. A. Johnston of Christiansburg, Va., president, and A. D. Walton of Roanoke, treasurer; capital $90,000 to $300,000.

Shenandoah—Iron Furnace.—The Alleghany Ore & Iron Co. is arranging to blow in the Gem furnace; general office, Clifton Forge, Va.

WEST VIRGINIA.

Benwood—Electric-light Plant.—Ohio Valley Electric Co. of Benwood and McMechen has incorporated, with $50,000 capital, to construct and operate electric-light plant, etc.; incorporators, W. H. Snyder, Charles Schad, Robert Newton, Michael F. Deegan of Benwood and S. E. Dorsey of McMechen.

Benwood — Bridge Construction.—The City Railway Co. of Wheeling, W. Va., is arranging for the construction of a bridge across the Ohio river, connecting Benwood with Bellaire, Ohio.

Blaine—Coal-mining.—Blaine Coal Co. has been organized with Joseph E. Davis, 1 Broadway, New York, N. Y., president, and L. A. Hinckley, Land Title Building, Philadelphia, Pa., secretary-treasurer, to handle the output of the Blaine coal mine, which has a daily capacity of 1000 tons.

Bluefield—Coal Mines.—Robert E. Shirey, William S. Foutz, Andrew J. Hearn and associates have incorporated the St. Paul Coal Co., with $50,000 capital, to mine coal.

Buckhannon—Saw-mills, Planing Mills, etc. Cherokee Lumber Co. has been incorporated, with $25,000 capital, by G. F. Stockert, C. D. Munson, M. F. Stockert, G. A. Newon and E. E. Bailey, to operate saw-mills, planing mills, etc.

Charleston—Oil Wells.—Velvet Oil Co. has been incorporated with $24,000 capital by G. O. Chilton, W. E. Chilton, I. E. Chilton, J. S. Chilton and E. I. Wood to drill for oil.

Charleston — Rubber-stamp Works, Printing, etc.—Kanawha Rubber Stamp & Printing Co. has been incorporated, with an authorized capital of $10,000, by J. B. Edgar, D. O. Bucher, D. C. Lovett, Jr., John E. Norvell and Hilda N. Edgar, to manufacture rubber stamps, conduct printing plant, etc.

Grafton—Construction Company.—Grafton Construction Co. has been incorporated, with $25,000 capital, by W. E. Harton, George W. Powell, Thomas F. Jobe and associates of Pittsburg, Pa.

Lumberport — Hardware Company.—Incorporated: Horner Hardware Co., with $10,000 capital, by V. L. Horner, C. S. Horner, J. H. Horner and others.

Martinsburg — Mercantile. — E. N. Fiery Mercantile Co. has been incorporated by E. N. Fiery and others.

Rowlesburg — Telephone System.— Rowlesburg Telephone Co. has incorporated, with $10,000 capital, to construct and operate telephone lines in Preston county; incorporators, W. F. Shoch, J. E. Wootring, A. J. Moone, George Hayes and associates.

Weston—Supply Company.—R. N. Koblegard, John Wilson, J. T. Pratt, L. E. Sleigh and W. S. Haskins have incorporated the Weston Supply Co. with $10,000 capital.

Williamson — Mercantile.—Russell Produce & Feed Co. has been incorporated, with $10,000 capital, by Mark H. Russell, J. H. Morris, S. D. Stokes of Williamson, W. A. Russell and A. V. Peters of Huntington, W. Va.

INDIAN TERRITORY.

Muskogee—Water-works and Sewerage System.—W. W. Cook & Sons, Junction City, Kan., have contract at $40,995 for laying mains and constructing settling basin, and the Jackson Filter Co., St. Louis, Mo., has contract at $5750 for construction of filters in connection with water-works extension previously reported.

Tulsa—Flour Mill.—Midland Mill & Elevator Co. is reported as having purchased site on which to erect $60,000 flour mill with a capacity of 1000 barrels. This company was previously incorporated under Oklahoma City with $100,000 capital by J. W. Maney and associates of El Reno, O. T.

OKLAHOMA TERRITORY.

Alva—Flour Mills.—Alva Roller Mills has increased capital from $75,000 to $100,000.

Anadarko—Water-works.—City has voted proposed $10,000 bond issue for the completion of water-works system. Address The Mayor.

Apache—Development Company.—C. Hawthorne, Mac Boynton and F. E. Boyer have incorporated the Apache Development Co., with $1,000,000 capital.

Apache — Telephone System. — A company has been organized with O. W. Rogers, president; Arthur Dyer, secretary, and M. Hester, treasurer, to build a telephone line from Apache to Anadarko, O. T.

Granite—Grain and Fuel Company.—Farmers' Union Grain & Fuel Co. has been incorporated, with $10,000 capital, by G. W. Briggs, W. Z. Thompson, G. W. Spears, Doc Bellows and D. L. Hardin.

Blackwell — Creamery. — J. W. Randall, C. Sink, J. J. Carson, J. J. Harmes and others have incorporated the Blackwell Creamery Co. with $6000 capital.

Guthrie—Syrup Company.—G. V. Pattison and associates have incorporated the California Grape Syrup Co. of Guthrie and San Francisco, Cal., with $300,000 capital.

Guthrie—Mercantile and Manufacturing.—Shearer-Vale General Merchandise & Manufacturing Co. of Guthrie and San Francisco, Cal., has been incorporated by G. V. Pattison of Guthrie, A. P. Hale and W. L. Von Johansen of San Francisco, Cal.

Hominy—Drug Company.—Chartered: Mullins Drug Co., with $2500 capital, by Ira Mullins, Frederick Drummond and Prentiss Price.

Oklahoma City—Elevators.—Midland Mill & Elevator Co., recently incorporated, is contemplating the erection of a chain of elevators with a capacity of 600,000 bushels.

Oklahoma City—Tin and Woodenware Company.—Miller-Tooey Tin & Woodenware Co. has been incorporated with $15,000 capital by E. J. Miller, A. H. Miller, J. A. Tooey and M. E. Tooey.

Shawnee — Hardware.—Incorporated: The Estes Hardware Co., with $25,000 capital, by W. J. George, E. L. Estes and others.

BURNED.

Aberdeen, Miss.—Gordon House; loss $10,000.

Allapaha, Ga.—Pait & Jones' shingle mill; loss $2000.

Atlanta, Ga.—T. R. Sawtell's stockyards and Stevens' Planing Mills; loss $60,000.

Barbourville, Ky.—Queen City Hotel; loss $20,000.

Blevins, Texas.—Cotton gin of E. R. Kline and Georgia Hall of Moody, Texas.

Center, Ala.—W. H. Lokey's cotton gin; loss $5000.

Colquitt (P. O. Terrell), Texas.—J. P. Giehern's cotton gin.

Demopolis, Ala.—Excelsior Steam Laundry.

Fort Worth, Texas.—Texas & Pacific Railway Co.'s union passenger station, damaged to the extent of $10,000; L. S. Thorne, general manager, Dallas, Texas.

Junction, O. T.—Cash & Young's cotton gin; loss $5000.

Marlinton, W. Va.—Greenbrier River Lumber Co.'s mill; loss $40,000.

Middleton, Ga.—Martin & Heard's cotton gin.

Mocksville, N. C.—Davie Hotel; loss $5000.

Montgomery, Ala.—State Normal School for Negroes, loss $20,000; W. B. Paterson, principal.

Monticello, Fla.—John M. Henry's cotton gin.

Mt. Clare, W. Va.—Hutchinson Fuel Co.'s coal tipple; loss $15,000.

Pikesville, Md.—Pikesville Distillery, owned by the Winand Distilling Co.; loss $15,000.

Rosetta, Miss.—W. F. Johnson's cotton gin; loss $2000.

Santo, Texas.—M. M. Littlefield's cotton gin; loss $5000.

South McAlester, I. T.—Main Hotel; loss $50,000.

Stevenson, Ala.—Bayne & Mitchell's sawmill; loss $7000.

Townville, S. C.—Townville Oil & Fertilizer Co.'s oil mill.

BUILDING NOTES.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Alexandria, Va.—Station.—Further details have been obtained concerning station for the Washington Southern Railway (Pennsylvania Railroad Co.) to be erected after plans and specifications by chief engineer maintenance of way, Pennsylvania Railroad Co., Philadelphia, Pa. Structure to be one story high with basement, 33.7x96 feet, with baggage-room one story high, 33.7x41 feet; brick with granite trimmings, steel beams, cast-iron columns, slate roofing, steel rolling doors, wrought-iron work, electric wiring and fixtures, sanitary plumbing, steam-heating system. Charles Gilpin, builder, Union Trust Building, Charles and Fayette streets, Baltimore, Md., is bidding on the construction. Bids to be in January 2.

Annapolis, Md.—Hospital Buildings.—The General Supply & Construction Co., 24 State street, New York, N. Y., has contract to erect five buildings, each two stories, for the Navy Department, in connection with the naval hospital previously reported; to be fireproof, low-pressure steam-heating apparatus, and cost $200,000. Ernest Flagg, 35 Wall street, New York, N. Y., prepared the plans.*

Atlanta, Ga.—Masonic Temple.—Plans have been completed for Masonic Temple previously reported to be erected by the Masonic Temple Co. at a cost of $100,000. Hoke Smith is chairman building committee.

Augusta, Ga.—School Building.—Louis F. Goodrich has prepared plans for two-story brick school building to cost $12,000 in North Augusta to replace building destroyed by fire.

Baton Rouge, La.—Opera-house.—It is reported that O. F. Rabenhorst, W. T. Bariller and associates will erect an opera-house.

Bryan, Texas—School Building.—City will vote on the issuance of $6000 of bonds for the erection of school building. Address The Mayor.

Burlington, N. C. — Hotel. — Wheeler & Runge, Charlotte, N. C., are preparing plans for $25,000 hotel. R. L. Holt can be addressed.

Calera, Ala.—School Building.—City will vote January 9, 1905, on the issuance of $5000 of bonds for the erection of school building. Address Dr. J. H. Gunn.

Charlotte, N. C. — Apartment-house. — Wheeler & Runge, Charlotte, N. C., have prepared plans and are receiving bids on double apartment-house for Mrs. H. C. Jones.

Chattanooga, Tenn.—Store Building.—D. B. Loveman Company will erect addition to store building at a cost of about $50,000.

Chattanooga, Tenn.—Apartment-house.—W. T. Downing is preparing plans for apartment-house reported last week to be erected by J. I. Lupton, 511 East 4th street, at a cost of $150,000; to be of brick and stone, hot-water or steam heat, gas and electric lights, etc.

Chattanooga, Tenn.—Sanitarium.—Dr. E. F. Lovejoy, J. R. Pound, R. L. Huntington, F. E. De Saiba and J. H. McLean have incorporated as the Lovejoy Sanitarium with $50,000 capital.

Chattanooga, Tenn.—Office Building.—Reports state that the Volunteer State Life Insurance Co. contemplates the erection of 10-story fireproof office building at a cost of $250,000.

Cleburne, Texas—City Hall and Fire Station.—J. R. Wallis has contract at $6914 for the erection of City Hall and fire station, previously reported.

Colquitt, Ga. — Courthouse. — Alexander Blair, Macon, Ga., is preparing plans for Miller county's courthouse, for which $20,000 of bonds were previously reported voted.

Columbia, S. C.—Bank Building.—Carolina National Bank is having plans prepared by Frank P. Milburn for the erection of proposed bank building and three store buildings, each store building to be 24x134½ feet.

Conway, S. C.—Building.—B. G. Collins contemplates erecting brick building.

Covington, Ky.—Warehouse.—Lewis Marx is having plans prepared by Schofield & Walker for the erection of four-story warehouse, 25x50 feet, of brick with composition roof, and cost $10,000.

Dallas, Texas—Business Building.—Emerson Manufacturing Co. has let contract to A. Watson for the erection of five-story building previously reported. Hubbell & Greene prepared the plans.

Dallas, Texas—Car Barn.—J. C. McCord has contract to erect car barn for the Dallas Consolidated Electric Street Railway Co. previously reported; structure to be 94x306 feet, of brick, and cost $15,000; C. A. Gill & Son, architects.

Dallas, Texas—Office Building.—Sanguinet & Staats are preparing plans for three-story building, 50x150 feet, reported last week to be erected by the Trust Company of Dallas; Wm. G. Breg, president.

Eatonton, Ga. — Bank Building. — Bank of Eatonton has let contract to D. C. Allen of Atlanta, Ga., for the erection of bank building previously reported; structure to be two stories, brick, 22x60 feet, after plans by Butt & Morris, Atlanta, Ga.

Eatonton, Ga. — Courthouse. — W. J. Beeland, Macon, Ga., is reported as having contract to erect Putnam county's $30,000 courthouse previously reported.

Frederick, Md.—Hotel.—P. E. Long, proprietor City Hotel, has awarded contract to Lloyd Culler, builder, for the construction of hotel to be located at Braddock Heights, Md., after plans and specifications by Woodruff-McLaughlin Company, constructing engineer and architect, 100 East Lexington street, Baltimore, Md. Structure to be three stories high with basement, 44x159 feet; blue limestone to second story and frame construction for remaining stories; tin roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system; freight lift; cost to be about $20,000. This building previously mentioned.

Greensboro, N. C.—Library Building.—J. C. Morris has contract for the erection of $15,000 library building at the Normal and Industrial College, after plans by Hook & Sawyer, Charlotte, N. C.

Hamer, S. C.—Church.—Presbyterian congaregation will erect $8000 edifice. Address The Pastor.

Hattiesburg, Miss.—Hotel.—Thomas Sully, New Orleans, La., is preparing plans for five-story hotel previously reported to be erected by the Gulf & Ship Island Railroad Co.

Huntsville, Ala.—Store Building.—Glidwell Bros., Fayetteville, Tenn., have contract to erect store building for Terry Bros. & Rogers, previously reported; structure to be three stories, 52x137 feet, be equipped with electric elevators and cost $25,000.

Jacksonville, Fla. — Warehouse.—Dyal-Upchurch Investment Co. will erect two warehouses, each 56x106 feet, with metal roofs.

Jacksonville, Fla.—Cottages.—T. Griffith has permit to erect five one-story cottages.

Jacksonville, Fla.—Residence.—W. B. Camp, 20 Main street, is preparing plans for residence for Rev. J. T. Boone; structure to be two stories, 32x45 feet, of frame with galvanized-iron roof. Bids for construction will be received until January 1, 1905.

Jellico, Tenn.—Warehouse.—F. Hubbell & Son, Knoxville, Tenn., have contract to erect one-story warehouse 116x125 feet for the H. T. Hackney Co. and Jellico Hardware Co., previously reported. L. C. Waters prepared the plans.

Jonesville, Va.—Jail.—A. M. Goins, secretary Jail Committee, Jonesville, Va., will open bids January 2, 1905, for the erection of jail for Lee county. Drawings, plans and specifications on file in the office of the B. F. Smith Fireproof Construction Co., Pope Building, Washington, D. C., or at the office of secretary, Jonesville. Certified check for $500, made payable to the board of supervisors of Lee county, must accompany each bid. Usual rights reserved.

Kansas City, Mo.—Store and Office Building.—Wm. E. Minor has had plans prepared by Howe, Holt & Cutler for three-story store and office building, 48x132 feet; cost $35,000.

Knoxville, Tenn.—Office Building.—E. T. and A. T. Sanford and Dr. C. Deaderick are having plans prepared by Baumann Bros. for the erection of addition to the Empire Building, to be seven stories, 27x64 feet, fireproof construction, and cost about $40,000. Contract for construction will be let in about 60 days.

Knoxville, Tenn. — Hotel. — R. H. Cate of Knoxville and Lynn Hahn of Asheville, N. C., have engaged Barber & Klutz to prepare plans for hotel reported last week; structure to be five stories, 50x150 feet.

Knoxville, Tenn. — Store Building.—Miller Bros. Company has secured site on which to erect seven-story building of brick and stone, 75x150 feet, at a cost of $200,000.

Lawton, O. T.—City Hall.—City has let contract to W. H. Rhodes, J. T. Tedford and W. R. Canfield at $18,250 for the erection of City Hall, previously reported.

Lebanon, Va.—Courthouse and Jail.—Board of supervisors of Russell county have voted the issuance of $20,000 of bonds for remodeling courthouse and erecting new jail; L. L. Bays, clerk.

Lexington, Ky. — Church. — Upper Street Baptist Church contemplates the erection of edifice; Rev. W. P. Hines, chairman building committee.

Louisville, Ky.—Office Building.—It is reported that the Louisville & Nashville Railroad will erect 10-story steel, brick and stone office building, 60x200 feet, at a cost of $400,000, and plans are now being prepared. R. Montfort, Louisville, is chief engineer.

Madison, Ga.—Courthouse.—Morgan county will vote January 17, 1905, on the issuance of $40,000 of bonds for the erection of courthouse. Address County Judge.

Manchester, Va. — Warehouse. — Wingo, Ellet & Crump Shoe Co., Richmond, Va., is having plans prepared for the erection of one-story brick warehouse 120x260 feet.

Maryville, Tenn. — Chapel and Assembly Hall.—Maryville College will erect chapel and assembly hall at a cost of $15,000. Saml. T. Wilson is president.

McKinney, Texas—Depot.—It is reported that the Houston & Texas Central Railroad, Jeff N. Miller, Houston, Texas, general manager, and the Missouri, Kansas & Texas Railway, A. A. Allen, general manager, St. Louis, Mo., will erect passenger depot, for which plans have been prepared.

Memphis, Tenn.—Hotel.—Memphis Motor Carriage Co. has let contract to W. P. Jeffries for the erection of two-story hotel 32x44 feet.

Memphis, Tenn.—Dwelling.—R. B. Snowden has contract to erect two-story residence at a cost of $50,000 for J. T. Fargason, Jr., after plans by B. S. Cairns.

Milltown, Ga.—Store Building.—Patten & Talley will erect store building.

Milltown, Ga.—Store Building.—Allen, Tally & Co. will erect brick store building.

Milltown, Ga.—Dwelling.—M. V. Gress is erecting $10,000 residence.

Mobile, Ala. — Dwelling. — Adam Glass is having plans prepared by George D. Hulburt, 5 Bank of Mobile Building, for the erection of two-story addition, 22x50 feet, to residence at a cost of $8000. Bids for construction will be asked about April 1.

Myersville, Md.—Depot and Warehouse.—Hagerstown Railway Co., Hagerstown, Md., will erect depot and warehouse.

Newton, Miss.—Masonic Temple.—Newton Masonic Lodge No. 157 contemplates erecting lodge building.

Norfolk, Va.—Dwellings.—Chartered: Raleigh Realty Corporation, with John Kevan Peebles, president; R. H. Wainwright, vice-president, and Charles McI. Tunstall, secretary-treasurer, for the erection of 10 dwellings at a cost of $50,000. John K. Peebles is preparing the plans.

Orange, Texas—City Hall.—M. A. McKnight and I. F. Chaffee are preparing plans for city hall reported last week to be erected; structure to be two stories, 40x60 feet, and cost $4500; J. J. Windham, mayor.

Palacios, Texas — Hotel. — Palacios City Townsite Co. contemplates the erection of modern hotel.

Pine Bluff, Ark.—Hotel.—It is reported that M. Holland of Holland & Lambert contemplates the erection of hotel.

Portia, Ark.—Bank Building.—Wm. DeArman is receiving bids for the erection of bank building.

Raleigh, N. C. — Freight Depot. — Wm. W. Gwathmer, Jr., chief engineer Seaboard Air Line Railway, states there is no truth in the report previously mentioned that his company would erect a $25,000 freight depot.

Russellville, Ky.—Bank Building.—Citizens' National Bank has let contract to Wiley Bros., Chamber of Commerce Building, Chicago, Ill., for making proposed improvements to bank building at a cost of $8000.

Sandersville, Ga. — Church.— Sandersville Baptist Church will erect pressed-brick edifice at a cost of $12,000 with a seating capacity of 1000. A. Chamlee is pastor.

San Angelo, Texas — Church. — George E. Webb states there is no truth in report mentioned last week that the Baptist congregation will erect $10,000 edifice.

Senatobia, Miss. — Warehouse. — Walker, Bernard & Baker have let contract to J. E. Bridger for the erection of two-story building 45½x86½ feet, after plans by Johnson & Son.

Sherman Heights, Tenn.—School Building. A three-story brick school building will be erected at a cost of about $13,000 to replace structure recently burned; J. C. Clark, C. M. Engers and Ed Edwards, school directors.

Staunton, Va.—Depot.—Chesapeake & Ohio Railway has accepted plans by T. J. Collins & Son for the erection of proposed depot.

St. Joseph, Mo.—Warehouse.—Alfred Meier, architect, 24 Ballinger Building, will receive bids until January 1 for the erection of two-story warehouse, 50x400 feet, for the Empire Storage Co.; structure to be of brick, mill construction, composition roof, etc., and cost $20,000.

St. Louis, Mo.—Business Building.—Jean Jameton Construction Co. has contract to erect proposed five-story building at 1011 Market street for the Modoc Realty Co.; to be of concrete construction.

St. Louis, Mo.—Apartment-house.—S. S. Pomeroy has purchased site at Maryland and Boyle avenues on which to erect apartment-house.

St. Louis, Mo.—Apartment-house.—Joseph Waser has purchased site on which to erect apartment-house.

St. Louis, Mo.—Hospital Improvements.—Jewish Hospital Association has decided to build addition to hospital on Delmar boulevard. August Frank is president.

Tulsa, I. T.—Opera-house.—Lindsey Kincaid has let contract for the erection of opera-house to cost $50,000 and have a seating capacity of 1200.

Valdosta, Ga.—School Building.—City has accepted plans by T. W. Smith, Columbus, Ga., for the erection of school building, for which $35,000 of bonds was previously reported voted.

Wake Forest, N. C.—Dormitory.—C. W. Barrett of Raleigh, N. C., is preparing plans for $6000 dormitory to be built at Wake Forest College.

Washington, D. C. — Apartment-house. — Bates Warren has purchased site on which to erect seven-story apartment-house.

Washington, D. C.—School Building.—J. M. Dunn is the lowest bidder at $44,387 for the erection of the proposed John W. Ross School in Mt. Pleasant.

Washington, D. C.—Office Building.—Thos. F. Walsh has purchased site at 8th and G streets on which to erect office building.

Washington, D. C.—Church Improvements. First Baptist Church (colored) will expend $10,000 in improvements to edifice. Address The Pastor.

Washington, D. C.—College Buildings.—The George Washington College will call for a ground plan of a group of buildings upon Van Ness Park, containing about five acres, and a plan for an administration building. The architects selected are Hornblower & Marshall, Washington, D. C.; George B. Post & Sons, New York, N. Y.; Delano & Aldrich, New York, N. Y.; Hale & Morse, New York, N. Y.; Parker & Thomas, Boston, Mass., and Baltimore, Md., and William A. Boring, Baltimore, Md. Charles W. Needham is president.

Wheeling, W. Va.—Business Block.—Giesey & Faris have prepared plans for 12-story building, 100x127 feet, of fireproof construction, for Henry Schmulbach, to be equipped with steam and hot-water heating plant, electric lights, three passenger and one freight elevator, and cost $500,000. Bids for construction will be received until January 10, 1905.*

RAILROAD CONSTRUCTION.

Railways.

Baltimore, Md.—The Western Maryland Railroad has completed 10 miles of its Cumberland extension from Big Pool to Hancock, Md., and has put that much of the line in operation.

Beaumont, Texas.—Ed. Kennedy and a party of Northern capitalists have, it is reported, been investigating concerning the plan to build an electric railway between Beaumont and Port Arthur. Those in the party were L. S. Gillette, J. H. Rich, A. M. Clifford, C. E. Clifford, O. T. Mapes, D. L. Wilcox and J. Burkoles of Minneapolis, C. A. Mayes of Mena and Ed. Kennedy.

Brenham, Texas.—G. A. Heilig and J. F. Wolters, said to represent St. Louis capital, have submitted propositions to build an electric railway from Brenham to La Grange. President A. D. Milroy of the Brenham Com-

mercial Club may be able to give information.

Brookhaven, Miss. — The Brookhaven & Pearl River Railroad Co., which is to build a line west from Brookhaven to a point on the Pearl river, has been incorporated by S. J. Carpenter, Charles Rose, S. E. Morton, Joseph Jullies and D. J. Batchelder, Jr., who are directors.

Charleston, S. C.—The Charleston & Summerville Electric Railway Co. has applied for a franchise to lay tracks in this city, its line to reach Summerville, 30 miles. This is the company incorporated by E. P. Guerard of Charleston and others, including Gen. A. J. Warner of Marietta, Ohio.

Charleston, S. C.—Reported that the Charleston Terminal Co. will make improvements. E. B. Pleasants, chief engineer of the Atlantic Coast Line at Wilmington, N. C., or W. H. Wells, engineer of construction Southern Railway, Washington, D. C., may be able to give information. W. E. Huger of Charleston is president.

Charleston, W. Va.—The Imboden & Odell Railroad, which has built 11 miles of line from the mouth of Blue creek to Quick's, proposes to extend from the latter point to Pond Gap, 18 miles, early next spring. This information comes to the Manufacturers' Record from Hon. W. A. MacCorkle of Charleston.

Cheraw, S. C.—Mr. W. F. Stevenson, president of the Merchants and Farmers' Bank, writes the Manufacturers' Record confirming the report that plans are under consideration for the extension of the Bennettsville & Cheraw Railroad.

Chicago, Ill.—The Chicago & Alton Railroad has, it is reported, purchased 42 acres of land in the East Bottoms at Kansas City, Mo., and will, it is said, expend $500,000 to improve its freight terminals. G. H. Kimball is chief engineer at Chicago. About 10 miles of sidings are to be built, according to a later report.

Chicago, Ill.—The Chicago, Rock Island & Pacific Railway is reported to be surveying for a line between Little Rock and Camden, Ark. W. L. Darling is chief engineer.

Cincinnati, Ohio.—Reported that the Cincinnati, Hamilton & Dayton Railway will be extended to coal fields in West Virginia, the extension to be made from Ironton, Ohio. C. A. Wilson is chief engineer.

Clarksville, Texas.—The Oklahoma, Texas & Gulf Railway is reported to have located its line to Daingerfield, and it will be extended to Longview. E. L. House of St. Louis has been elected a director. The officers are N. P. Doak, president; John W. O'Neill, vice-president; Alexander Richmond, second vice-president and general attorney; Alfred S. Tubbs, secretary and treasurer; D. W. Bolich, general manager and chief engineer; directors, Dr. B. A. Dinwiddie, J. B. Lassiter, E. L. House and C. D. Lennox.

Conway, S. C.—F. A. Burroughs, president Conway, Coast & Western Railway, is reported as saying that grading is under way between Conway and Cool Springs, S. C., 12 miles, surveys being made from Cool Springs to Britton's Neck, four miles, and for a branch from Britton's Neck to Marion, 20 miles. D. T. McNeill is general manager, and R. E. Beatty is chief engineer, both at Conway, S. C. The entire road when built will extend from Southport, N. C., via Conway to Sumter, S. C., 135 miles, with the Marion branch of 20 miles north from Britton's Neck.

Corpus Christi, Texas.—Col. Uriah Lott is reported as saying that the St. Louis, Brownsville & Mexico Railway's extension to San Antonio will probably be from Robstown via Oakville, Texas. F. G. Jonah is chief engineer.

Corpus Christi, Texas.—The Hidalgo branch of the St. Louis, Brownsville & Mexico Railway, extending from Harlingen to Fordyce, Texas, 55 miles, has been completed and opened for traffic.

Donaldsonville, La.—It is reported that location surveys have been finished for extensions of the Donaldsonville & Napoleonville Railway from Johnson, La., to Houma, La., 40 miles, and from Thibodaux, La., to Gibson, La., 16 miles; contracts to be let soon. M. D. Bringier of Donaldsonville is general manager.

Earle's, Ky.—A survey is reported made for the Kentucky Midland Railroad from Madisonville, Ky., to Central City, Ky., 26 miles; construction by the company to begin about January 15; grade, 1.5 per cent.; curvature, .6 per cent., both maximum. M. M. Wheeler is chief engineer.

Felsenthal, Ark.—The Little Rock & Monroe Railroad will, it is reported, complete its bridge across the Ouachita river this month and lay the 14 miles of track from the river to Monroe, La., immediately, to open the line by February 1. Line from Felsenthal to Monroe is 45 miles long, and connects at the former place with the Eldorado & Bastrop Railway. The new road is controlled by the Union Saw-Mill Co. of Huttig, Ark.

Gulfport, Miss.—J. E. Chisolm and H. C. Turnage have, it is reported, secured the grading contract for 11 miles on the Gulf & Ship Island Railroad extension from Columbia, Miss., to Silver Creek, Miss. W. W. Vail is chief engineer.

High Point, N. C.—Donald Fitzgerald of New York, stopping at the Elwood Hotel with Attorney Caudle of Wadesboro, N. C., is reported to be working on a plan to build an interurban electric railway line to be known as the High Point, Central Piedmont & Wadesboro Electric Railway.

Kansas City, Mo.—A franchise has been granted at Sedalia, Mo., to the Sedalia & Warrensburg Electric Railroad Co. The line is to be 30 miles long. W. E. Winner of Kansas City and local capitalists are said to be interested. Rights of way and land for power-house are reported secured.

Kansas City, Mo.—It is reported that bids for the construction of the Guthrie, Fairview & Western Railway will be received in Kansas City on January 20. W. S. McCaull is president at 564 Speidley Building.

Kansas City, Mo.—It is reported that the Kansas City, Mexico & Orient Railway will immediately begin track work north of Sweetwater, Texas, and 35 miles will be laid by February 1.

Lebanon, Russell County, Va.—Reported that the Clinch Valley Barytes Co. of Blacks Ford, this county, may extend its railroad (which now connects its mills with Honaker, Va.) south via Lebanon to Bristol, Va-Tenn., from 30 to 40 miles.

Longleaf, La.—O. E. Gammill of Edgerly, La., is reported to be one of the contractors on the Crowell & Spencer Lumber Co.'s railroad between Longleaf and Lecompte, 12 miles. The other contractor is W. B. Wilburn of Andrew, La.

Middlesboro, Ky.—Reported that T. J. Asher & Sons will build a narrow-gauge railroad from Wasioto, on the Louisville & Nashville Railroad, to a point near Harlan C. H., about 10 miles. It will open up timber lands.

Minneapolis, Minn. — L. J. Buckner, reported to represent the Winston Bros. Company of Minneapolis, is said to be making surveys for a railroad to connect Greenville, Miss., with Alexandria, La.

Moss Point, Miss.—Messrs. W. Denny & Co., lumber manufacturers, write the Manufacturers' Record that they expect to build a railroad next year from Moss Point to Lucedale, 35 miles. They have let the contract for the first 15 miles.

Muskogee, I. T.—Mr. W. P. Dewar, secretary of the Missouri, Oklahoma & Gulf Railroad Co., which is projected to build from Joplin, Mo., to the Gulf of Mexico, is reported as saying that tracklaying will begin in January on the grade from Muskogee to Henryetta, 45 miles, it being expected to complete this section by May next.

Nashville, Tenn.—The appointment of Leon F. Lonnbladh as chief engineer of the Tennessee Central Railroad is reported. He will have charge of construction and also of maintenance of way.

New Orleans, La.—Reported that Col. Jas. McNaught of New York has employed engineers to make a survey for the proposed New Orleans & Mississippi Midland Railroad from New Orleans to a point in Neosho county, Mississippi, crossing the Alabama & Vicksburg Railroad at or near Forest, Miss. T. Marshall Miller of New Orleans is reported interested; also Dumont Clark, R. T. Wilson, T. F. Oakes, Charles M. Jessups and others, including Robert T. Duncan of 25 Broad street, New York.

New Orleans, La.—An officer of the Southern Pacific system is reported as saying that the company will build 52 miles of new line from Lafayette, La., to Port Allen, opposite Baton Rouge, on the Mississippi river and the stream will be bridged there. Also that the company will eventually seek extensions to both Gulfport, Miss., and Pensacola, Fla. T. Fay, vice-president of Morgan's Louisiana & Texas Railroad at Houston, Texas, may be able to give information.

New York, N. Y.—C. O. Burns of New York is reported as saying that the proposed railroad from Richmond to Urbanna, Va., will be built and in operation within a year; also that surveys are now being made.

Oberlin, La.—The T. N. Hewitt Lumber Co. of Oberlin is reported to be building a three-mile extension of its tramroad.

Ocilla, Ga.—It is reported that the Valdosta & Osierfield Railroad may be extended 13 miles from Osierfield to Broxton, Ga. Construction of the main line to Helena is reported to be rapidly progressing. J. A. J. Henderson is president. Others interested are J. W. Paulk, Wm. Henderson, Rozen Henderson, G. S. Wilson, J. C. Luke, J. B. George and Mayor J. J. Walker.

Oklahoma City, O. T.—The Oklahoma City, Henriettn & St. Louis Railroad has been incorporated to build a line from Woodward, O. T., via Oklahoma City to Checotah, I. T., about 280 miles. The directors are H. W. Clegren, John H. Dibble, J. H. Wheeler, J. W. Bryor and John W. Shartel, all of Oklahoma City.

Orange, Texas.—President L. Miller and Vice-President W. H. Stark of the Orange & Northwestern Railroad are reported as saying that B. F. Yoakum of the Frisco system has acquired a block of stock in the road, but that the building of the extension will be pushed without delay. The terminus of the extension is not yet decided. H. L. Montandon is chief engineer.

Pickens, W. Va.—The Holly Lumber Co. writes the Manufacturers' Record that the Holly & Addison Railroad now extends from Pickens to Johnsonburg, W. Va., 15 miles; also that there are six miles more of grade on which track may be laid next year.

Plant City, Fla.—The Plant City, Arcadia & Gulf Railroad Co. has filed articles of incorporation, the purpose being to purchase 12 miles of line built by the Warnell Lumber & Veneer Co. of Plant City, and to extend it southeast through Hillsborough, Polk, Manatee and De Soto counties for about 65 miles. The incorporators are Charles A. Root, D. C. Thompson, William Schneider and Albert Schneider, all of Plant City, and who are, respectively, president, vice-president, treasurer and secretary of the company. Peter O. Knight of Tampa, Fla., is general attorney.

Port Arthur, Texas.—The Port Arthur, Houston & Western Railway Co., chartered four years ago with William McDaniel of Port Arthur as president, is reported as being investigated by prominent railway men who may build its proposed line from Port Arthur to Houston, Texas, about 80 miles. Surveys were made several years ago.

Port Royal, S. C.—The German-American Lumber Co. has, it is reported, purchased steel rails and stored them at Millville for an extension of its tramroad 30 miles to a point near Ally.

Raleigh, N. C.—Rapid tracklaying is reported on the Raleigh & Pamlico Sound Railroad, which is being built from Raleigh towards Washington, N. C. Track is now within a mile of the Neuse river.

Richmond, Va. — The Chesapeake & Ohio Railway is reported to have let a contract to C. O. Harrison for grading for yard improvements at Huntington, W. Va.

San Marcos, Texas.—Judge B. G. Neighbors of this (Hays) county is reported as saying that a railroad may be built from San Marcos along the San Marcos river via Martindale, Fentress, Staples and Prairie Lea to Luling, on the Southern Pacific Railway.

Selma, Ala.—President F. M. Abbott of the Selma Street & Suburban Railway writes the Manufacturers' Record denying the press report that he is promoting the construction of the Birmingham & Selma Air Line Railroad, although he is desirous to aid it in every way in his power. He feels that it is only a question of a reasonably short time when it will be built.

Sheffield, Ala.—The Sheffield Company has been incorporated in Alabama by George Parsons, Henry Parsons and J. W. Worthington. This is the company owning the Sheffield, Florence & Tuscumbia Electric Railway. It was formerly incorporated in New Jersey.

Siloam Springs, Ark.—The Siloam Springs Railroad, Light & Power Co. has been incorporated to build an interurban electric line from Siloam Springs to adjacent towns and villages. D. Zimmerman, president; Connelly Harrington, J. A. Riggen, R. J. Alfrey, E. C. McCulloch, C. J. Martin, C. Gamble, J. W. Webster and W. T. La Follette are the incorporators.

St. Augustine, Fla.—Mr. E. Ben Carter, general roadmaster of the Florida East Coast Railway, writes the Manufacturers' Record that the extension from Miami to Homestead, Fla., 28 miles, has been completed and was put in operation December 15. Surveys and estimates are being made with a view to an extension from Homestead to Key West, about 136 miles.

St. Louis, Mo.—The proceeds of the new bond issue of the Missouri Pacific Railway, amounting to $25,000,000, will, it is reported, be used for improvements to its lines, including the St. Louis, Iron Mountain & Southern Railroad. H. Rohwer is chief engineer at St. Louis.

Suwannee, Fla.—The Suwannee Sulphur Springs Co. will build seven miles of electric railway from Suwannee to Live Oak, Fla. J. S. Bowen, manager of the Suwannee Springs Hotel, or C. J. McGuher may be able to give information.

Summerton, S. C.—C. M. Davis, Ellison Capers, Jr., and others are reported to be working on a plan to build an electric railway from Wright's Bluff, on the Santee river, via St. Paul and Summerton to Manning, S. C.

Tulsa, I. T.—W. H. Hendron, chief engineer of the proposed Kansas City, Tulsa & Southwestern Railway, is reported as saying that the survey is almost completed from Tulsa to Chetopa, Kan.

Warsaw, Ind.—Major George D. Miles, president of the Estatoe Electric Co., writes the Manufacturers' Record confirming the report that he has purchased the Asheville & Weaverville Railway, a projected line in North Carolina, and says that he is changing the grade and extending the survey through Yancey county. The line will connect Asheville with Boonford, N. C., the latter being on the South & Western Railway and the former on the Southern Railway. It will be about 50 miles long, and will run via Weaverville, Burnsville and Micaville; work to begin by the company on January 1. R. L. Dyer is engineer in charge.

Washington, D. C.—The Southern Railway Co. is reported to be receiving bids for building passing tracks between Selma, Ala., and Meridian, Miss.

Washington, D. C.—The Southern Railway, it is reported, will ask for bids to construct a spur 2.5 miles long from Mobile Junction, Ala., to a point west of Bessemer, Ala. It will be a connecting line. The company is also reported to be projecting a line from Artemus, Knox county, Kentucky, to the Jellico coal fields. W. H. Wells is engineer of construction.

Weatherford, Texas.—Concerning the proposed Chicago, Weatherford & Brazos Valley Railway, Mr. George M. Bowie of Weatherford writes the Manufacturers' Record that those interested have the charter and field notes and permission to issue bonds for a line 36 miles long from Weatherford to Bridgeport, Texas. They are now trying to negotiate with some construction company.

Wilson, N. C.—The Wilson Auto-Transit Co. has been chartered by W. B. Young and others to operate auto and electric car lines anywhere in this State.

Street Railways.

Abilene, Texas.—The city council has granted a franchise to Fred Cockrell of Abilene and associates to build an electric street railway 10 miles long. Eastern capital is said to be interested.

Asheville, N. C.—J. H. Cutler and R. P. Haynes are reported to be interested in a plan to build a street railway in West Asheville.

Austin, Texas.—The Austin Electric Co. will, it is reported, build a new track on Congress avenue.

Fort Worth, Texas.—Reported that a deal is about closed for the sale of the Arlington Heights property by Ferdinand Fish of New York, and that the new owners will build a street-car line.

Columbus, Miss.—Construction is reported begun on the street railway in Columbus. Those interested are G. T. Heard, F. M. Abbott of Selma, Ala.; T. J. O'Neill and others.

Lake Providence, La.—The Lake Providence & Gouldsboro Railroad Co., Limited, is reported to have awarded to A. B. Sanders of Shreveport, La., a contract to build two miles of electric railway through Lake Providence, and thence to Gouldsboro, a suburb.

Newport News, Va.—The Hampton Roads Railway & Electric Co. has opened its line to Old Point Comfort.

Salisbury, N. C.—Reported that the track is practically completed for the electric railway between Salisbury and Spencer.

Shreveport, La.—A. B. Sanders of Shreveport writes the Manufacturers' Record that he and others propose to build an electric railway at Clarksville, Texas. Capt. Arthur Hider of Greenville, Miss., is engineer in charge.

Wheeling, W. Va.—The City Railway Co. will, it is reported, extend its line to Martin's Ferry and Bellaire. The Wheeling & Elm Grove Railway is also to extend to Washington, Pa.

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Air Compressors. — Henry Schmulbach, Wheeling, W. Va., wants air-compressing system for cleaning office buildings.

Bag Machinery. — A. H. Lane, Valdosta, Ga., is in the market for complete outfit for converting cotton cloth into flour sacks, including sewing machines, starchers and cutting machines.

Bank Fixtures.—Citizens' Bank, G. M. Reddish, chairman committee, Somerset, Ky., will be in the market for bank fixtures.

Bank Fixtures.—Bank of Pinetops, Pinetops, N. C., is in the market for railing, desk and office fixtures.

Barytes-mill Equipment. — Sample Agency Co., 20 Pittsburg street, Newcastle, Pa., is in the market for one 100-horse-power engine (reversible), one 150-horse-power boiler, one set 12x16 rolls following crusher, one crusher to crush to three-eighths inches, two tons per hour capacity; one breaker mill to follow rolls, one 18-foot tube mill, one pump (3½ inches, 1800 feet), one gasoline engine for pump, one hoisting engine to hoist on 45-degree incline about 6000 pounds on trucks, 8000 feet wire cable for same, one dynamo and 100 incandescent lights, 2000 feet three-and-one-half-inch pipe threaded two ends, with coupling; one saw table, 22-inch rip, adjustable frame; one saw table, 22-inch cross-cut, adjustable frame; one wagon scales 6000 pounds capacity, one platform scales 1000 pounds capacity, 36 standard mine-car axles and wheels for same, belting, line shafting, hangers, etc. Send catalogues and agents' discounts.

Belting.—See "Mill Supplies."

Belting.—See "Barytes-mill Equipment."

Boiler.—Sample Agency Co., 20 Pittsburg street, Newcastle, Pa., is in the market for one 150-horse-power boiler. (See "Barytes-mill Equipment.")

Boiler.—W. H. Brown, care Almeria Hotel, Tampa, Fla., is in the market for a 40 or 50-horse-power boiler; good second-hand preferred. (See "Engine and Boiler.")

Boiler.—Harry Tamblin, care of Corrie Cole Mining Co., Webb City, Mo., will be in the market for 125-horse-power boiler.

Boiler.—North Fork Lead & Zinc Co., Jesse Roberts, vice-president and general manager, Lock Box 23, Neck, Mo., wants prices on 100-horse-power boiler.

Boiler.—People's Ice & Coal Co., Hattiesburg, Miss., wants one 200-horse-power Scotch marine boiler.

Boilers.—See "Engines and Boilers."

Boilers.—Kennedy Stave & Cooperage Co., Birmingham, Ala., will be in the market for two 72-inch by 16-foot tubular boilers. (See "Engine and Boilers.")

Brick Machinery.—H. L. Alexander, Martinsburg, W. Va., wants prices on machinery and equipment for brick plant.

Brick-plant Equipment.—Alex. A. Scott Brick Co., Knoxville, Tenn., is in the market for brick machinery and kilns.

Bridge Construction. — J. D. Laughlin, clerk, Vicksburg, Miss., will receive bids until January 2, 1905, for the construction of a steel bridge over Stout's bayou on Road No. 1 as per plans and specifications on file in clerk's office. Board of supervisors of Warren county reserves usual rights.

Broom Machinery.—O. E. Obenshain, Buchanan, Va., wants information regarding machinery for making brooms.

Broom Machinery.—W. A. McCulley, Belton, Ark., wants addresses of manufacturers of broom machinery.

Building Equipment and Supplies.—See "Structural Steel and Iron."

Building Equipment and Supplies.—J. M. Thrash, Davidson River, N. C., wants prices on iron, roofing and glass.

Building Material.—Kennedy Stave & Cooperage Co., Birmingham, Ala., will be in the market for building material.

Concrete-block Machinery.—W. P. Wallis, Americus, Ga., contemplates purchasing machinery for the manufacture of artificial stone.

Contractors' Equipment.—M. E. Davis, 11 Broadway, New York, N. Y., is in the market for a small traction steam shovel with one-half to one-yard capacity dipper.

Corn Mill.—R. J. Rhodes, Cartersville, Va., wants to buy a corn mill of a portable pattern.

Corn-mill Equipment. — Columbia Milling Co., Columbia, Va., is in the market for new or second-hand 42-inch Esopus stones for cornmeal outfit.

Corn-mill Equipment.—Hunter & Mankin, Mt. Pleasant, Tenn., will want prices on equipment for corn mill. (See "Flour-mill Equipment.")

Cotton-batting and Wadding Machinery.—The Martin Weiss Dry Goods Co., Beaumont, Texas, wants to correspond with makers of machinery for manufacturing cotton batting and wadding from linters, relative to purchasing equipment.

Cotton-mill Machinery.—The Rhode Island Co., Spray, N. C., is in the market for second-hand reels.

Cotton-twine Machinery.—The American Commission Co., 121 Whitehall street, Atlanta, Ga., wants to correspond with makers of cotton-twine machinery relative to buying equipment for $50,000 mill. Complete information is wanted.

Crushing Machinery. — See "Barytes-mill Equipment."

Drilling Machinery.—Keystone Oil, Gas & Mining Co., F. E. Finley, secretary, Woodward, O. T., wants prices on standard drill rigs with all necessary machinery for putting down a 2500-foot well.

Drills.—See "Machine Tools."

Dry-kiln.—Kennedy Stave & Cooperage Co., Birmingham, Ala., will be in the market for dry-kiln apparatus.

Electrical Equipment.—Cochrane Showcase Co., Charlotte, N. C., will be in the market for two 25-horse-power motors.

Electrical Equipment.—General Supply & Construction Co., 24 State street, New York, N. Y., wants prices on motors and other electrical equipment.

Electrical Equipment.—Henry Schmulbach, Wheeling, W. Va., wants prices on generators.

Electrical Equipment.—Footers' Dye Works, Cumberland, Md., will be in the market for power and electrical equipment and supplies.

Electrical Equipment. — See "Barytes-mill Equipment."

Electric-light Plant.—See "Lighting Apparatus."

Elevator.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids January 7, 1905, for the installation of an electric passenger elevator and hydraulic freight lift in the United States postoffice, custom-house, etc., at Jacksonville, Fla., in accordance with drawings and specifications, copies of which may be obtained on application.

Engine and Boiler.—Sample Agency Co., 20 Pittsburg street, Newcastle, Pa., is in the market for one 100-horse-power engine (reversible) and one 150-horse-power boiler; also wants gasoline engine. (See "Barytes-mill Equipment.")

Electric-power Plant.—J. F. Gautney, Jonesboro, Ark., wants detailed information regarding the transmission of power by electricity, as he contemplates building a plant to transmit said power a distance of 100 miles.

Elevators.—General Supply & Construction Co., 24 State street, New York, N. Y., wants prices on elevators.

Engine and Boiler.—W. H. Brown, care Almeria Hotel, Tampa, Fla., is in the market for a 25 or 30-horse-power engine and 40 or 50-horse-power boiler; good second-hand preferred.

Engine and Boilers.—Kennedy Stave & Cooperage Co., Birmingham, Ala., will be in the market for a 14x20 automatic engine and two 72-inch by 16-foot tubular boilers.

Engines and Boilers.—Henry Schmulbach, Wheeling, W. Va., wants prices on engines and boilers.

Flour-mill Equipment.—Hunter & Mankin, Mt. Pleasant, Tenn., will want prices on equipment for flour mill. (See "Corn-mill Equipment.")

Foundries.—See "Plow Works."

Foundry Equipment. — Sanford-Day Iron Works, Knoxville, Tenn., wants prices on a wheel press capable of handling 36-inch wheels, about 100-ton capacity.

Foundry Equipment.—A. L. Russell, general manager Virginia Stove & Manufacturing Co., Basic City, Va., wants catalogues of foundry equipment and supplies, except boiler, engine and cupola.

Furniture Manufacturers.—Newton Hanson, Box 53, Fort Myers, Fla., wants addresses of parties manufacturing corner shelves or brackets.

Furniture Manufacturers.—The H. M. Hollman Company, Houston, Texas, wants to correspond with manufacturers of cabinets to hold phonograph records.

Gas Plant.—See "Lighting Apparatus."

Grist Mill.—P. C. Clegg, Cordele, Ga., wants prices on machinery and equipment for grist mill to be operated by steam.

Grist Mill.—W. H. Brown, care Almeria Hotel, Tampa, Fla., is in the market for grist-mill outfit capable of turning out 50 barrels a day.

Hammer.—See "Machine Tools."

Hardware.—United Hardware Co., Ltd., 1005-1007 Canal street, New Orleans, La., wants catalogues and prices from hardware manufacturers.

Heating Apparatus.—L. L. Bays & Sons, Lebanon, Va., are in the market for heating apparatus.

Heating Apparatus.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids January 18, 1905, for low-pressure steam-heating apparatus complete in place for the United States postoffice at Yankton, S. D., in accordance with drawings and specifications, copies of which may be had at the office of the supervising architect or at the office of the superintendent at Yankton, S. D., at the discretion of the supervising architect.

Hoisting Equipment.—North Fork Lead & Zinc Co., Jesse Roberts, vice-president and general manager, Lock Box 23, Neck, Mo., wants prices on one geared hoist cylinder 7½x10¼.

Hoisting Equipment. — See "Barytes-mill Equipment."

Lath Machinery.—W. B. Henry, North Wilkesboro, N. C., wants cuts and prices of plaster lath outfits; new or second-hand.

Laundry Machinery.—Wm. Rhett, Columbus, Miss., wants addresses of manufacturers of laundry machinery.

Lighting Apparatus.—L. L. Bays & Sons, Lebanon, Va., are in the market for lighting apparatus.

Machine Tools.—Craggy Lumber Co., Swannanoa, N. C., wants to correspond with manufacturers of steam drills.

Machine Tools. — Davenport Locomotive Works, Davenport, Iowa, is in the market for a 2000-pound steam hammer of approved make, in first-class condition.

Mill Supplies.—Kennedy Stave & Cooperage Co., Birmingham, Ala., will be in the market for line shafting, pulleys, belting.

Mining-plant Equipment. — North Fork Lead & Zinc Co., Jesse Roberts, vice-president and general manager, Lock Box 23, Neck, Mo., wants prices on 100-horse-power boiler, one geared hoist cylinder 7½x10¼, and duplex pump 12x8½x10.

Piping.—Etowah Land & Improvement Co., Rome, Ga., wants prices on sewer pipe and 1½ and 2-inch water pipes.

Planing-mill Equipment.—Robinson & Salisbury, Portsmouth, Va., want prices on woodworking machinery, belting, pulleys and shafting for planing mill.

Plow Works.—P. O. Box 347, Wichita, Kan., wants manufacturers to make reversible self-sharpening plowshares, or will contract on royalty.

Plumbing Material and Tools.—Isthmian Canal Commission, J. G. Walker, chairman, Washington, D. C., will open bids January 18, 1905, for furnishing at Panama a quantity of plumbing material and tools in connection with work on the Panama canal. Pamphlets containing full information furnished on application. Usual rights reserved.

Power-plant Equipment.—See "Electrical Equipment."

Pump.—See "Barytes-mill Equipment."

Pump.—North Fork Lead & Zinc Co., Jesse Roberts, vice-president and general manager, Lock Box 23, Neck, Mo., wants prices on duplex pump 12x8½x10.

Pumping Engine.—Board of Public Works, City Hall, Kansas City, Mo., will open bids January 14, 1905, for the construction, delivery and erection of a self-contained vertical triple-expansion crank and flywheel pumping engine at the Turkey Creek pumping station, Kansas City; engine to have sufficient power and capacity to pump 20,000,000 United States gallons of water in 24 hours into the pump mains at Turkey Creek station, etc. Plans and general specifications on file in the office of the Water Department, Kansas City, Mo. Certified check for $5000, payable to the City Comptroller, must accompany each bid. Usual rights reserved; Everett Elliott, secretary Board of Public Works.

Pumps.—Henry Schmulbach, Wheeling, W. Va., wants prices on steam pumps.

Railway Equipment.—Jos. E. Bowen, Atlantic Office Building, Norfolk, Va., is in the market for a 12x18 eight-wheel standard-gauge mogul.

Railway Equipment. — See "Barytes-mill Equipment."

Railway Equipment.—D. W. Alderman & Sons Co., Alcolu, S. C., wants one second-hand standard-gauge mogul locomotive, from 12 to 14-inch diameter cylinders.

Roofing.—See "Building Equipment and Supplies."

Saw-mill.—D. E. Hulse, 421 124th street, New York, N. Y., wants to buy a good-sized portable saw-mill complete with planer and molding machine to use in Western North Carolina.

Scales.—The Rhode Island Co., Spray, N. C., is in the market for boiler-room scales.

Scales.—See "Barytes-mill Equipment."

Sewing Machines.—See "Bag Machinery."

Shafting.—See "Mill Supplies."

Shafting.—See "Barytes-mill Equipment."

Steam Shovel.—See "Contractors' Equipment."

Sterilizing Apparatus.—General Supply & Construction Co., 24 State street, New York, N. Y., wants prices on sterilizing apparatus.

Structural Steel and Iron.—Charles Gilpin, builder, 601 Union Trust Building, Charles and Fayette streets, Baltimore, Md., invites subbids on structural steel and iron work for seven-story hotel, for which he has the contract. Bids to be in December 28.

Telephones. — General Supply & Construction Co., 24 State street, New York, N. Y., wants prices on house telephones.

Water-power Machinery.—See "Electric-power Plant."

Wood Novelties.—See "Furniture Manufacturers."

Woodworking Machinery. — Connolly & Teague, Taylorsville, N. C., want addresses of manufacturers of veneer saws.

Woodworking Machinery.—Carpenter-Taylor Company, Rutherfordton, N. C., wants to purchase one double-end tenoner, 40 or 42-inch triple-drum sander, band resaw, 9 or 12-inch dovetailer, swing cut-off saw, wood-table rip-saw; all to be second-hand.

Woodworking Machinery.—W. W. White, Fork Union, Va., is in the market for a second-hand planer and matcher.

Woodworking Machinery.—See "Lath Machinery."

Woodworking Machinery.—See "Planing-mill Equipment."

MEXICO.

Hotel.—Julio Doucet of the Francia Hotel, Torreon, Coahuila, is reported to have decided upon the erection of a modern hotel to cost $100,000.

Electric-power Plant.—William MacKenzie of San Antonio, Texas; George B. Burbank and George Simons of New York, and A. S. Harvey of Leadville, Col., are planning the development of water-power at Malinaltango Falls, 70 kilometers from the City of Mexico. It is believed that 24,000 horse-power can be developed, and it is proposed to transmit this energy to Mexico City by electricity.

Record Run of Westinghouse Turbine

A memorable incident of the morning following the close of the St. Louis Exposition was the formal shut-down and inspection of the 600-horse-power Westinghouse steam turbine generating unit, after a continuous run of over 3962 hours. During the five and one-half months the unit was in operation it supplied current for light and power throughout the Westinghouse exhibits. Charles F. Foster, chief operating engineer of the exposition; H. M. Holman, supervising engineer at the government exposition gas engines tests, and a number of Westinghouse representatives were present when the engine was stopped. It was found to be in perfect condition, and there were no signs of wear, the bearings still retaining the tool marks as they had come from the shops. There have been at least two instances on record in America in which piston engines have been run continuously for about the same length of time as that of the record run of the Westinghouse turbine. The remarkable feature of the turbine run, of course, was the maintenance under load of a speed of 3600 revolutions a minute for such a long period. From 8.30 A. M. to 10.30 P. M. the load carried varied from 25 per cent. underload to 25 per cent. overload. The total number of revolutions was 855,792,000.

INDUSTRIAL NEWS OF INTEREST

Wants Vehicle Agency.

L. E. Blanchard of Harlem, Ga., wants to represent as agent some manufacturers of buggies, wagons and other vehicles.

Kentucky Coal Lands.

Investors or miners seeking a Southern coal property are invited to write H. N. Fischer of Webbville, Ky., for information regarding the 5000 acres of coal lands he offers for sale.

Wants to Represent Manufacturers.

The Banner Electric & Manufacturing Co. of Oklahoma City, O. T., wants to represent manufacturers of electric construction materials and supplies, also of automobiles. Correspondence is invited.

Block-Pollak Iron Co.

Announcement is made that the Block-Pollak Iron Co. of Chicago has established a branch office in St. Louis in Room 10, Chemical Building, 8th and Olive streets. Louis S. Simon will be the manager.

Lumber Mill Offers Contract.

George H. Styvan of Bobo, Miss., wants to saw and put on sticks at mill in large quantity long-run gum, plain and quartered oak and dimension stock for buyers who will estimate once a month and advance 75 per cent.

Cypress Lumber Co.'s Offices.

The Cypress Lumber Co. of Boston, Mass., announces the removal of its offices to the Broad Exchange Building, 88 Broad street. Correspondents of the company and buyers of cypress lumber are invited to note this change.

Engine and Boiler Works.

Manufacturers likely to be interested in an opportunity to purchase an established engine and boiler works are invited to write Messrs. R. H. Prubaker and Amos H. Landis, Lancaster, Pa. They, as administrators, will sell the John Best Steam Engine and Boiler Works on January 4 at public outcry. The Eureka Bark Mill Co. is included in the sale.

Coal and Coking Plant.

Operators who can be interested in an opportunity to engage in the coal and coke industry of the South are invited to address either the Carbon Coal & Coke Co., Norton, Va., or Geo. W. Esser, Mauch Chunk, Pa. Those named are desirous of selling an established and profitable coal and coke plant, details of which will be forwarded to inquirers.

Voorhees Gets Gold Medal.

The Voorhees Rubber Manufacturing Co. of 18-40 Bostwick avenue, Jersey City, N. J., manufacturer of high-grade mechanical rubber goods, hose, belting, packing, valves, tubing, mats, mattings, etc., also of the celebrated "Nubian" packing and gaskets, has been awarded the gold medal for mechanical rubber goods and the highest award for rubber belting at the Louisiana Purchase Exposition, 1904.

Select a Southern Engine.

The W. S. Askew Company of Newnan, Ga., will enlarge its corn and flour mills and will arrange to supply the power for these two mills and a planing mill all from one Corliss engine. Contract has been awarded to the Southern Engine and Boiler Works of Jackson, Tenn., for an 18x36 Corliss engine to do this work. The corn and flour mills are to operate night and day, and the engine will therefore have to run about 24 hours per day.

C. M. Steinmetz With Prescott.

Lumber manufacturers in the Eastern and Southern territory will be interested to be informed that C. M. Steinmetz has become connected with the Prescott Company of Menominee, Mich., having resigned his position with the Clark Bros. Co. of Belmont, N. Y. Mr. Steinmetz will act as machinery salesman and mill designer for the Prescott Company, and is ready to serve his friends in the trade with its usual promptness and effectiveness.

Hardwood Manufacturing Investment.

It is found necessary to secure a manager to take charge of an established and profitable hardwood and handle-manufacturing plant in Louisiana. The factory has a daily output of 60 dozen handles, and is located on three railways, besides in a section where timber is plentiful and cheap. The owners will either sell entirely or allow competent man to take $1000 worth of stock. For information address J. T. Bryant, 701 Oak street, Monroe, La.

President of Dehner-Wuerpel Co.

Those who have had trade relations with the Dehner-Wuerpel Mill Building Co. of St. Louis, Mo., will regret to hear of the death of Mr. Fred. E. Wuerpel, president of the corporation. For years Mr. Wuerpel gave his able services to the furtherance of the company's interests. W. R. Jones has been elected president of the Dehner-Wuerpel Mill Building Co. in succession to Mr. Wuerpel, with full powers of the office, and those who are interested are advised to be governed accordingly.

Baum Steam and Oil Separators.

The Baum Separator & Machine Co. of Manheim, Pa., is desirous of securing Southern representatives for the Baum Steam and Oil Separators, and invites correspondence on the subject. Baum separators have been on the market for a number of years, and are well known to engineers. A number of them were in use in the power plant of the Louisiana Purchase Exposition at St. Louis, and received merited recognition. Not only in this country, but also in foreign countries, the Baum specialties are well known.

Prizes for Lupton Window.

The David Lupton's Sons Co. of Philadelphia has received the highest award of the St. Louis Exposition for its metal window, and the Franklin Institute has awarded the Lupton Window the Edward Longstreth Medal. Architects and builders who are acquainted with the merits of the Lupton fireproof metal windows will readily acknowledge that the window deserves high commendation. Those who are not acquainted with the Lupton's merits are invited to write the company for instructive literature.

Some Northern Orders.

The Northern Electrical Manufacturing Co., Madison, Wis., recently received an order for three 150-kilowatt slow-speed generators from the Tennessee Coal, Iron & Railroad Co. of Birmingham, Ala. The order was received through J. B. McClary & Co., representing the Northern Electrical Manufacturing Co. at Birmingham. The Tennessee Coal, Iron & Railroad Co. is the largest of its kind in the South, and the order was secured in competition with all the first-class manufacturing companies.

Test This Lubricant.

Engineers and others who have once tested Albany Grease, the well-known lubricating compound made only by Adam Cook's Sons, 313 West street, New York city, continue to use it year after year. It is a habit which grows on one easily and profitably. Wm. Hasty, second engineer of the steamer Wm. Edwards, which plies on Lake Michigan, states: "I have been using Albany Grease for the last 16 years on different steamers, and am using it at the present time. I have always felt satisfied with the results it accomplished."

Awards to Philip Carey Products.

The Louisiana Purchase Exposition has awarded the Philip Carey Manufacturing Co. of Cincinnati, Ohio, the gold, silver and bronze medals for superiority and general excellence of its magnesia steam-pipe and boiler coverings, and gold medal on account of its magnesia flexible cement roofing. It is also interesting to note that the Carey Company received a gold medal for its products from the Toronto Exposition of September last. Those who know the merits of the Philip Carey products will appreciate the justice of these awards, and those who may not know them will find to their interest to write the company for literature giving the facts for consideration.

Weber Exhibit Sold.

The St. Louis exhibit of the Weber Gas & Gasoline Engine Co. of Kansas City, which was in service in the Steam, Gas and Fuels Building during the exposition period, has been sold to the Christopher E. Hertlein Company, manufacturer of dress and cloak trimmings, in New York. This plant consists of 150 horse-power Weber engine and 150 horse-power Weber suction gas producer, direct connected to a 75-kilowatt Western Electric generator. This is the engine and producer which secured the highest award for the Weber people at the St. Louis Exposition, and that it should finally be located in New York is especially gratifying to the Weber Company. It is announced to be the first producer gas power plant located in New York.

The $50,000,000 St. Louis Exposition

The Louisiana Purchase Exposition covered 1240 acres of land. Nothing like it was ever before attempted in magnitude. It was twice as large as the Chicago World's Fair and four times as large as the Paris Exposition. This by way of faint comparison. It is evident that it will be an immense undertaking to dismantle and distribute into avenues of trade the great quantity of materials of which the exposition is composed. This will be accomplished by the Chicago (Ill.) House Wrecking Co., the corporation which has become famous for its work of this character. The company has paid more than half a million dollars for all the physical properties of the St. Louis Exposition, and will be engaged about a year in the dismantling work. Over $10,000,000 worth of materials will be on the market, and the quickest buyers will get the lowest prices. Needless to say, the bargains will be without precedent. The material includes 100,000,000 feet of the finest quality lumber—its year of service only makes it all the better; also sash, doors, skylight, wire netting, felt roofing, steel roofing, staircases, balustrades, burlap, flags, flagpoles, bunting, plumbing material, pipe, valves and fittings, eave trough, conductor pipe, electrical apparatus, copper wire, steam road rollers, architectural material, fire apparatus, rubber hose, sporting goods, stoves, heaters, pumping machinery, relaying rails, frogs, switches, electric-light posts, safes, wagons and buggies, office furniture, household furniture, steel fenceposts, iron fencing, builders' hardware, tools and implements, office stationery, and thousands of other items. All of this material is for sale from the St. Louis headquarters of the Chicago House Wrecking Co., St. Louis yards, Exposition Grounds, St. Louis, Mo. A complete catalogue of the St. Louis material is being issued.

No. 6 Density of Keystone Grease.

Every user of lubricants should become acquainted with the merits of the No. 6 Density of Keystone Grease. This product is designed to replace all grades of engine and general machinery oil except cylinder oil. It can be applied by all kinds of ordinary oil-feeding devices, and will flow freely through the common squirt can. The manufacturer guarantees the No. 6 to be capable of reducing friction to a far lower extent between the bearing surfaces than any other lubricant. There are other features which will appeal to all discriminating users of lubricants. Write the Keystone Lubricating Co., 20th street and Allegheny avenue, Philadelphia, for literature.

Cement-Pipe Molding Press.

There is considerable interest being shown in the manufacture of sewer pipe from cement in this country, and in this connection it will interest many to hear that the Kielberg Cement Pipe Molding Press is to be introduced in this country. The machine has demonstrated its effectiveness in producing at very low cost pipes of various sizes from cement mortar. Pipes made with the Kielberg machine are remarkable for their unusual strength, accuracy of dimensions, internal smoothness and non-absorbent qualities. The American patents on this machine have been secured by Messrs. F. L. Smidth & Co. of 39 Cortlandt street, New York, the well-known manufacturers of tube mills and other modern grinding machinery.

Rigid Specifications Improved On.

The rigid specifications drawn by the United States Navy Department for auxiliary engines required in the equipment of vessels of recent construction have done much to improve their general standard of efficiency. It is therefore unusual to find that even these exceptional requirements have been improved upon. Such, however, is noticeably true in the case of recent designs of vertical cross-compound engines built by the B. F. Sturtevant Co., Hyde Park, Mass., for direct-connected generator-driving. They have actually shown upon an economy test a consumption of steam per horse-power per hour fully four pounds less than that demanded by the specifications. These results are characteristic of a line of specially high-grade engines being built by the above company to develop from 25 to 150 horse-power.

A Special Davenport Switching Locomotive.

The Union Terminal Railroad of St. Joseph, Mo., has awarded contract for the construction of a six-wheeled connected (0-6-0) switching locomotive, with 19x24 cylinders, weight of 120,000 pounds on all drivers, boilers to be 62 inches in diameter and constructed for 200 pounds working pressure. This locomotive is to have special equipment as follows: Westinghouse airbrakes, Leach air sander, Gollmer bell ringers, Little Giant pneumatic blowoff cocks, Crosby safety valves, McConway & Torley couplers, Monitor injectors, Nathan lubricators and Jerome metallic packing. The tender is to be built entirely of steel and be equipped with Bettendorf steel bolsters and Bettendorf steel trucks. The Davenport Locomotive Works of Davenport, Iowa, will build this locomotive, and will deliver it in February.

The "Femco" Incandescent Lamps.

With the very general use of electricity for lighting purposes in small towns, as well as large cities, comes the demand for incandescent lamps that give users the greatest degree of satisfaction. Immediate lighting effects, as well as durability, and at a reasonable cost, are aimed at by lamp manufacturers. The "Femco" Incandescent Lamp has been especially successful. It is made in a modern and thoroughly equipped factory. Every "Femco" is guaranteed to be exactly as represented, and warranted the equal of any similar article on the market. At this time the "Femco" manufacturer is making active efforts to introduce its lamp throughout the entire South, and invites correspondence from dealers and users who are interested in the best electric incandescent lamps. The "Femco" is made by the Franklin Electric Manufacturing Co. of Hartford, Conn.

Large Concrete-Block Building.

It is stated that the Federal Casket Co.'s new factory building at Shadyside, W. Va., is the largest and most substantially constructed cement-block structure in the world. The materials for building were furnished by the Wagner Manufacturing Co. of Wheeling, and the blocks used—many thousands of them—were made on the H. S. Palmer patent hollow concrete building-block machines. The Palmer Hollow Concrete Building Block Co. of Washingtjon, D. C., furnishes the Palmer machines. It has recently secured a contract for erecting a water-works building at Charlotte, N. C., the Palmer blocks to be used. The building will cost $18,000. Several thousand barrels of Old Dominion Portland cement will also be used. This cement is manufactured by the Virginia Portland Cement Co. of Fordwick, Va., of which the Wm. G. Hartranft Cement Co. of Philadelphia is selling agent.

Largest Electrical Generators Driven by Gas Engines.

The California Gas and Electric Corporation, San Francisco, Cal., has just placed an order with the Crocker-Wheeler Company, Ampere, N. J., for three 4000-kilowatt capacity three-phase 13,200-volt 25-cycle 83 R. P. M. revolving field alternators, to be driven by 6000-horse-power gas engines built by Snow Engine Co. These generators are the largest in capacity in the world driven by gas engines, and will furnish power for operating all the street railways in San Francisco and vicinity. This important sale by a company which has been building alternating-current machinery only a few months is indeed a cause for congratulation. It is due in part to the fact, as announced several months ago, that the Crocker-Wheeler Company is the American licensee of Brown, Boveri & Cie., the celebrated Swiss electrical engineers. But the reputation for excellence which the Crocker-Wheeler Company has built up during the past 16 years of manufacture of direct-current apparatus has had much to do with the result.

Allis-Chalmers Power Manager.

Another strong addition to the Allis-Chalmers staff is O. A. Stranahan, whose experience has been entirely with the Westinghouse Companies. Mr. Stranahan has been appointed manager of the power department of the Allis-Chalmers Company, and will have charge of the sales of reciprocating engines, gas engines and steam turbines. Mr. Stranahan has given much attention to gas-engine developments, particularly with regard to producer and blast-furnace gas developments, which are very much farther advanced in Europe than in the United States. He graduated from Cornell in 1890, and immediately thereafter entered the service of Westinghouse, Church, Kerr & Co., working up through their various departments and becoming chief engineer of their Chicago office. When the British Westinghouse Company was formed Mr. Stranahan was appointed to the charge of their engine business. He began these duties in 1900, and was engaged in them up to the time of his appointment by the Allis-Chalmers Company as manager of its power department.

Modern Warehousing at Norfolk.

One of the best-known and largest warehousing enterprises in the South announces the completion of extensive additions to its previous facilities, warehousing accommodations for the storage of cotton, peanuts, fer-

tilizer materials, fruits, flour, vegetables, lumber and general merchandise, with every facility for handling cheaply by water and rail. Negotiable receipts are issued to patrons, and funds may be realized on these documents if desired. The enterprise referred to is the Seaboard Wharf & Warehouse Co. of Norfolk. This company's warehouses are of the latest standard build, and command the lowest rates of insurance, and will be rented by the year or month, or storage will be taken at current rates. Being in close proximity to New York, Baltimore and all points in the New England States, the company offers exceptional facilities to merchants, importers and dealers. The company handles goods at the minimum cost by using the very latest devices and methods at wharves and depots. Correspondents are invited to write the main offices at 365 Withers Building, Norfolk, Va., for full information.

Asphalt and Coal-Tar Products.

There is a steadily-increasing demand for asphalt and coal-tar products, and manufacturers are busily engaged in meeting the conditions that prevail. Recently there has been such a call for the output of the Impervious Product Co. that the refinery and works at Fairfield, Md., have been enlarged, the improvements embodying the latest improved processes and appliances for turning out the best goods at the least cost. The company controls some of the largest and best asphalt plants in the country, and its facilities for manufacturing and for shipping by way of the Patapsco river and the Baltimore & Ohio and Pennsylvania railroads enable it to offer high-grade goods at the lowest possible prices. Asphalt (crude and refined), asphalt paving cement, asphalt roofing cement, asphalt varnish gum, asphalt mastic, asphalt roof coating, asphalt block and tiles, insulating compounds, pipe coating, rubber substitute, briquette binder, roofing pitch, etc., are included in the Impervious Product Co.'s offerings. Offices have been established at 213 St. Paul street, Baltimore, in order to more readily take care of the wants of buyers in the asphalt field.

Mosher Boilers on Vanderbilt Yacht.

Those who are interested in the use of boilers on boats should note the announcement being made that the Yarrow boilers on the yacht of Wm. K. Vanderbilt, Jr., are being displaced by two Mosher boilers, contract for this change having been awarded to the Mosher Water Tube Boiler Co. of No. 1 Broadway, New York. The exact weight of the Yarrow boilers, with water and fittings, is 11 tons each, while the weight of the Mosher boilers, with water and all fittings, is only 10.95 tons each, notwithstanding the Mosher boilers will each have 2810 square feet of heating surface and 60 square feet of grate surface, as against 1840 square feet each of heating surface and 32.5 square feet of grate surface in the old boilers. The extreme lightness and compactness of the Mosher boilers is further exemplified by the official test recently made by the United States government on the United States monitor Florida, in comparison with three sister vessels—Wyoming, Arkansas and Nevada—built from the same design and identical in every respect except the boilers. The Mosher Company says that in the efficiency test the next nearest competitor to the Mosher boilers burned over 23 per cent. more coal per horse-power per hour. The relative weights of the boiler complete with all fittings and water to working level were remarkable in their showing of superiority for the Mosher boiler. The company will give the facts to inquirers.

Brown & Hunter, Auditors.

It is not only as an expert and rapid calculator that the modern public accountant offers his services to business men and corporations. He puts his training to the test in solving the problems that arise in the management of large industrial and commercial enterprises, in devising their systems and untangling the mass of complications that serve to check progress. During recent years the most substantial corporations and those that afford their stockholders the best results are the ones most anxious to have their accounts investigated and audited by the expert. The report of such auditing is usually appended in annual reports. The owners of Southern business enterprises have not been backward in appreciating the advantages of the public accountant and auditor. They are giving considerable employment to those engaged in that special branch. Prominent among these are Messrs. Ralph H. Brown and Joel Hunter of Atlanta. This firm of public accountants and auditors does not, of course, limit its services to its own city, but is prepared at all times to arrange for examining and systematizing the books of outside firms and corporations. Messrs. Brown and Hunter have been more than usually successful in their chosen profession, and have had an experience in various branches of manufacturing and mercantile activity that make their knowledge prolific of practical result to those who employ them. They have offices at 1219, 1220 and 1221 Empire Building, Atlanta, Ga.

TRADE LITERATURE.

Baltimore's Architectural Exhibit.

There has been unusual interest shown in architectural originality and practical work in Baltimore since the great fire of last winter. During the year, as plans and specifications for the modern structures to be erected in the burned district have appeared, this interest has increased steadily. Partly because of this, but also because of the general interest manifested at all times in the artistic, there has been held in the city this week an architectural exhibit under the auspices of the Baltimore Architectural Club and the Municipal Art Society. The drawings are hung in the Peabody Institute, and all this week a multitude has been visiting and inspecting the drawings shown. Among the more interesting features presented is the original design of the Capitol at Washington, the drawings for the development of Homewood for the Johns Hopkins University, a Carnegie library, also models of the Savings Bank of Baltimore and of the National Mechanics' Bank. It would be needless to enumerate all the drawings shown, but it may be stated that not only Baltimore architects are represented, but also the most prominent members of that profession in all the great cities of the country. In connection with the exhibit the Baltimore Architectural Club has issued a handsomely-printed, illustrated and bound catalogue. This book presents views of various classes of buildings, showing the different schools of design which have contributed to the world's structures in the way of both beauty and utility.

The MF Calendar.

The MF calendar is something new in its line. It is being distributed by the American Sheet & Tinplate Co., offices in Frick Building, Pittsburg, Pa. The calendar is in handy form for use and may be readily carried in the pocket. It presents some timely reminders that roofing tin of the proper quality meets all the requirements of a protection for the top (or sides in some cases) of buildings of all kinds. Ask the company for an MF.

"We Never Sleep."

"We never sleep" is an expression typified by the appearance and shape of an owl pictured in relief on a calendar for 1905 which is being distributed by E. C. Atkins & Co. (Incorporated) of Indianapolis, Ind. The expression is itself typical of the wide-awake, diligent methods pursued by this company in the production and distribution of the output of its factory. Messrs. E. C. Atkins & Co. manufacture saws and mill supplies of all kinds.

The French & Co. Calendar.

Turn over a new leaf and you will find a daily reminder of our existence. So say Messrs. Samuel H. French & Co. of Philadelphia in distributing their memorandum calendar for 1905. This yearly visitor to business offices is found to be most convenient for making notes of things that must not be forgotten. It enables one to make notes for any day in the year. Messrs. French & Co. manufacture paints and deal extensively in Portland cements, tiles, mantels, grates and numerous articles demanded in the building trades. Write them for literature.

"Bright Tinplate."

Merchant & Co., Inc., tinplate manufacturers, Philadelphia, New York, Chicago and Brooklyn, have just issued "Bright Tinplate," which tells of their extensive works, their method of manufacture and the processes by which their high-grade bright tinplates are made. Merchant's bright tinplates have a reputation for quality that has taken many years of thought and study to develop. During the process of manufacture each plate is handled by a large force of expert workmen, each of whom is best fitted to do his particular work, and this fact demonstrates at once the extreme care with which the plates are inspected and the rigid assortment they are subjected to in order to make them doubly valuable. The "Palma" brand has an extra charcoal finish, tissue-paper packed, extra coating, cleaned by hand, and made in the best manner possible through palm oil. The "Florence" is a popular brand in use by large manufacturers of high-grade tinware, dairy supplies, etc. A copy of "Bright Tinplate" will be mailed to any applicant.

FINANCIAL NEWS

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office Manufacturers' Record,
Baltimore, Md., December 21.

As compared with the late activity, the Baltimore stock market has been quiet during the past week, about the only very active issues being those of the United Railways, concerning which the reports of a pending deal continued. Toward the close of the period there was, however, a decline in the price of these securities. Seaboards also fell off in sympathy with the New York market, and Cotton Ducks, recently so much in evidence, were neglected. Quite an advance took place in Alabama Consolidated, the common stock rising about five points and the preferred more than that. Investment issues were generally firm.

In the dealings United Railways common rose from 14⅜ to 14¾, reacted to 13⅜ and recovered to 13⅞, with last sale at 13½; the incomes went from 53 to 54½ and fell back to 50; the 4s receded from 93 to 92½. United Light & Power 4½s sold at 93½. Consolidated Gas sold at 84 and the 6s at 112. Seaboard common dropped from 17½ to 16½; the preferred from 37 to 35, with last sale at 35¼; the 4 per cents changed hands between 83⅛ and 84¾, last sale at 84; the 10-year 5s at 102¾ and the 3-year 5s at 99½. Cotton Duck common sold from 8⅞ down to 8, and the 5 per cents at 74¾ down to 74. G.-B.-S. common was traded in at 10 and 9½, the incomes from 27⅜ to 27 and the firsts at 56¾ and 56½.

Bank stocks sold as follows: Mechanics', 28; Union, 120½; Second National, 188¼; Old Town, 11; Western, 40½. Trust and other company shares brought prices as follows: Continental, 162½ to 161¾; Fidelity & Deposit, 158 to 156¼; International, 134½ to 140; Baltimore Trust, 325 to 320; Union Trust, 53½ to 56.

Other securities traded in were as follows: Atlantic Coast Line common, 149⅛ to 155, with last sale at 153½; do. Consolidated 4s, 100; Northern Central stock, 104½ to 105¼; Baltimore Brick common, 9 to 9¾; do. preferred, 46 and 50; Lexington Street Railway 5s, 104; Charleston & Western Carolina 5s, 112⅝; South Side Railway & Development 5s, 87½; Alabama Consolidated Coal & Iron common, 34⅜ to 39, last sale at 36½; do. preferred, 84 to 89½, last sale at 85½; do. 5s, 85 and 85¼; Consolidation Coal, 68; Maryland Telephone 5s, 95 and 96; Atlantic Coast Line of Connecticut, 310; Western Maryland new 4s, 90; Savannah, Florida & Western 5s, 116½; Anacostia & Potomac 5s, 105¾ to 106; Macon Railway & Light 5s, 97½ and 97⅜; Baltimore City 5s (1916), 120⅛; Atlantic Coast Line of Connecticut 5s, 115; Georgia & Alabama Consolidated 5s, 112½; Carolina Central 4s, 98; Virginia Midland 2d, 111¼; Charleston City Railway 5s, 94; Metropolitan (Washington) 5s, 118; Virginia Centurys, 98¼; Georgia Southern & Florida 1st preferred, 100; South Bound 5s, 112; City & Suburban (Baltimore) 5s, 113¼; Baltimore City Passenger 5s, 106¾; Baltimore Traction 5s, 116½; Virginia Midland 5th, 115; West Virginia Central 6s, 114; Florida Southern 4s, 97½; Maryland & Pennsylvania 4s, 94⅞; Baltimore City 3½s (1930), 111.

It is reported that national banks will be established next year at Louisburg and Kinston, both in North Carolina.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended December 21, 1904.

Railroad Stocks.	Par.	Bid.	Asked.
Atlanta & Charlotte	100	163¾	170
Atlantic Coast Line	100	153½	153¾
Atlantic Coast Line of Conn.	100	310	325
Georgia Sou. & Fla. 1st Pref.	100	99	100
Georgia Sou. & Fla. 2d Pref.	100	68	...
Seaboard Railway Common	100	16¼	16¾
Seaboard Railway Preferred	100	35	36
United Railways & Elec. Co.	50	13⅜	13⅝
Bank Stocks.			
Citizens' National Bank	10	28¾	...
Commercial & Far. Nat. Bank	100	100	...
Drovers & Mech. Nat. Bank	100	...	410
Farmers & Mer. Nat. Bank	40	...	59
First National Bank	100	145	...
German Bank	100	102½	...
Merchants' National Bank	100	170	...
National Bank of Baltimore	100	119	...
National Howard Bank	10	11	12
National Bechanics' Bank	10	...	28
National Union Bank of Md.	100	120	121
Old Town Bank	10	11	11½
Western National Bank	20	40	40½
Trust, Fidelity and Casualty Stocks.			
American Bonding & Trust	50	40	...
Baltimore Trust & Guarantee	100	320	325
Colonial Trust	50	...	32
Continental Trust	100	161	163
Fidelity & Deposit	50	157	160
International Trust	100	135	140
Maryland Casualty	25	...	60
Mercantile Trust & Deposit	50	...	160
Union Trust	50	55½	57
Miscellaneous Stocks.			
Alabama Con. Coal & Iron	100	35½	38
Ala. Con. Coal & Iron Pref.	100	85½	88
Consolidated Gas	100	84	86
Consolidation Coal	100	68	70
Cotton Duck Voting Trust	100	8	8½
G. B. & S. Brewing Co	100	9¼	10¼
United Elec. L. & P. Pref.	50	48	49¾
Railroad Bonds.			
Albany & Northern 5s, 1946		94½	...
Atlanta & Charlotte 1st 7s, 1907		...	108½
Atlan. Const Line 1st Con. 4s, 1952		99⅝	100
Atlantic Coast Line 4s, Ctfs., 1952		91	...
Atlantic Coast Line (Conn.) 5s		114	117
Carolina Central 4s, 1949		...	99
Charleston & West. Car. 5s, 1946		112⅝	113
Char., Col. & Aug. 1st 5s, 1910		117⅛	...
Char., Col. & Aug. 2d 7s, 1910		110	...
Coal & Iron Railway 5s, 1929		107¼	108
Florida Southern 4s, 1940		97	98
Georgia & Alabama 5s, 1945		112¼	112¾
Georgia, Car. & North. 1st 5s, 1929		112¼	112½
Petersburg, Class A 5s, 1926		115	...
Potomac Valley 1st 5s, 1941		117	119
Seaboard Air Line 4s, 1950		83¾	84½
Seaboard Air Line 5s, 10-year, 1911		102½	103⅛
Seaboard Air Line 5s, 3-year		99¼	99¾
Seaboard & Roanoke 5s, 1926		112	113
South Bound 5s, 1941		112	112½
Virginia Midland 4th 3-4-5s, 1921		113	114
Virginia Midland 5th 5s, 1926		115	...
Western Maryland new 4s, 1952		90¼	...
West Virginia Central 1st 6s, 1911		113¾	115
Wilmington & Wel. Gold 5s, 1935		119	...
Street Railway Bonds.			
Anacostia & Potomac 5s, 1949		...	106½
Augusta Rwy. & Elec. 5s, 1940		102	102¼
Baltimore City Passenger 5s, 1911		106½	106¾
Baltimore Traction 1st 5s, 1929		115½	116¼
Baltimore Traction Conv. 5s, 1906		100½	104
Charleston City Railway 5s, 1923		107	...
Charleston Con. Electric 5s, 1999		92¾	95
City & Suburban 5s (Balto.), 1922		...	113½
City & Suburban 5s (Wash.), 1948		106¼	107
Lexington Railway 1st 5s, 1949		103	104
Macon Rwy. & Lt. 1st Con. 5s, 1953		97¼	97½
Metropolitan 5s (Wash.), 1925		117⅝	118½
Newport News & Old Pt. 5s, 1938		...	100
Norfolk Railway & Light 5s		90½	91
Norfolk Street Railway 5s, 1944		108	...
North Baltimore 5s, 1942		...	119½
United Railways 1st 4s, 1949		92¼	92¾
United Railways Inc. 4s, 1949		50	50¼
Miscellaneous Bonds.			
Alabama Consol. Coal & Iron 5s		84	85
Consolidated Gas 6s, 1910		111	...
Consolidated Gas 5s, 1939		117	118
G. B. & S. Brewing 1st 3-4s		56	56¾
G. B. & S. Brewing 2d Incomes		27½	28
Maryland Telephone 5s		95	96
Mt. V. & Woodb'y Cot. Duck 5s		74	75
Mt. V. & Woodb'y Cot. Duck Inc.		29⅝	31
United Elec. Light & Power 4½s		93¼	94

SOUTHERN COTTON-MILL STOCKS

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending December 19.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	60	75
Aiken Mfg. Co. (S. C.)	85	90
Anderson Cotton Mills (S. C.)	...	115
Arkwright Mills (S. C.)	...	105
Augusta Factory (Ga.)	72	75
Belton Mills (S. C.)	99	101
Bibb Mfg. Co. (Ga.)	...	102
Brandon Mills (S. C.)	...	102
Buffalo Cotton Mills (S. C.)	...	92½
Buffalo Cotton Mills (S. C.) Pfd.	93	96
Cabarrus Cotton Mills (N. C.)	122½	...
Chadwick Mfg. Co. (N. C.)	...	102
Chiquola Mfg. Co. (S. C.)	...	95
Clifton Mfg. Co. (S. C.)	85	91½
Clifton Mfg. Co. (S. C.) Pfd.	...	101
Clinton Cotton Mills (S. C.)	135	...
Columbus Mfg. Co. (Ga.)	...	90
Courtenay Mfg. Co. (S. C.)	...	105
Dallas Mfg. Co. (Ala.)	79	85
Darlington Mfg. Co. (S. C.)	85	90
Eagle & Phenix Mills (Ga.)	106	...
Easley Cotton Mills (S. C.)	101	103½
Enoree Mfg. Co. (S. C.)	...	85
Enoree Mfg. Co. (S. C.) Pfd.	...	100
Enterprise Mfg. Co. (Ga.)	...	80
Exposition Cotton Mills (Ga.)	160	200
Gaffney Mfg. Co. (S. C.)	55	58
Gainesville Cotton Mills (Ga.)	...	50
Graniteville Mfg. Co. (S. C.)	125	130
Greenwood Cotton Mills (S. C.)	...	102
Grendel Mills (S. C.)	100	...
Henrietta Mills (N. C.)	...	196
King Mfg. Co., John P. (Ga.)	88	90
Lancaster Cotton Mills (S. C.)	100	110
Lancaster Cot. Mills (S. C.) Pfd.	...	100
Langley Mfg. Co. (S. C.)	92	98
Laurens Cotton Mills (S. C.)	...	171
Limestone Mills (S. C.)	...	95
Louise Mills (N. C.)	...	98
Louise Mills (N. C.) Pfd.	...	102
Marlboro Cotton Mills (S. C.)	...	91
Mayo Mills (N. C.)	...	180